

SEQUENCE LISTING

<110> Pagano, M.

<120> METHODS TO IDENTIFY COMPOUNDS USEFUL FOR THE TREATMENT OF PROLIFERATIVE AND DIFFERENTIATIVE DISORDERS

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<140> To be assigned

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<150> 60/260,179

<151> 2001-01-5

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<170> PatentIn Ver. 2.0

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 <211> 447
 <212> PRT
 <213> Homo sapiens

<400> 10
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 Ser Asp Ser Cys Lys Glu Glu Ser Ser Thr Leu Ser Val Lys Met Lys
 35 40 45
 Cys Asp Phe Asn Cys Asn His Val His Ser Gly Leu Lys Leu Val Lys
 50 55 60
 Pro Asp Asp Ile Gly Arg Leu Val Ser Tyr Thr Pro Ala Tyr Leu Glu
 65 70 75 80
 Gly Ser Cys Lys Asp Cys Ile Lys Asp Tyr Glu Arg Leu Ser Cys Ile
 85 90 95
 Gly Ser Pro Ile Val Ser Pro Arg Ile Val Gln Leu Glu Thr Glu Ser
 100 105 110
 Lys Arg Leu His Asn Lys Glu Asn Gln His Val Gln Gln Thr Leu Asn
 115 120 125
 Ser Thr Asn Glu Ile Glu Ala Leu Glu Thr Ser Arg Leu Tyr Glu Asp
 130 135 140
 Ser Gly Tyr Ser Ser Phe Ser Leu Gln Ser Gly Leu Ser Glu His Glu
 145 150 155 160
 Glu Gly Ser Leu Leu Glu Glu Asn Phe Gly Asp Ser Leu Gln Ser Cys
 165 170 175
 Leu Leu Gln Ile Gln Ser Pro Asp Gln Tyr Pro Asn Lys Asn Leu Leu
 180 185 190

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Pro Val Leu His Phe Glu Lys Val Val Cys Ser Thr Leu Lys Lys Asn
195 200 205

Ala Lys Arg Asn Pro Lys Val Asp Arg Glu Met Leu Lys Glu Ile Ile
210 215 220

Ala Arg Gly Asn Phe Arg Leu Gln Asn Ile Ile Gly Arg Lys Met Gly
225 230 235 240

Leu Glu Cys Val Asp Ile Leu Ser Glu Leu Phe Arg Arg Gly Leu Arg
245 250 255

His Val Leu Ala Thr Ile Leu Ala Gln Leu Ser Asp Met Asp Leu Ile
260 265 270

Asn Val Ser Lys Val Ser Thr Thr Trp Lys Lys Ile Leu Glu Asp Asp
275 280 285

Lys Gly Ala Phe Gln Leu Tyr Ser Lys Ala Ile Gln Arg Val Thr Glu
290 295 300

Asn Asn Asn Lys Phe Ser Pro His Ala Ser Thr Arg Glu Tyr Val Met
305 310 315 320

Phe Arg Thr Pro Leu Ala Ser Val Gln Lys Ser Ala Ala Gln Thr Ser
325 330 335

Leu Lys Lys Asp Ala Gln Thr Lys Leu Ser Asn Gln Gly Asp Gln Lys
340 345 350

Gly Ser Thr Tyr Ser Arg His Asn Glu Phe Ser Glu Val Ala Lys Thr
355 360 365

Leu Lys Lys Asn Glu Ser Leu Lys Ala Cys Ile Arg Cys Asn Ser Pro
370 375 380

Ala Lys Tyr Asp Cys Tyr Leu Gln Arg Ala Thr Cys Lys Arg Glu Gly
385 390 395 400

Cys Gly Phe Asp Tyr Cys Thr Lys Cys Leu Cys Asn Tyr His Thr Thr
405 410 415

Lys Asp Cys Ser Asp Gly Lys Leu Leu Lys Ala Ser Cys Lys Ile Gly
420 425 430

Pro Leu Pro Gly Thr Lys Lys Ser Lys Lys Asn Leu Arg Arg Leu
435 440 445

<210> 11
<211> 1535
<212> DNA
<213> Homo sapiens

<400> 11
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ctgccccgata acatcctgct ggagctgttc acgcacgtgc ccgcccgcga gctgctgctg 240
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<210> 12
 <211> 338
 <212> PRT
 <213> Homo sapiens

<400> 12
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 Val Leu Ser Arg Pro Pro Pro Gly Gly Gly Asp Ser Phe Arg Thr Arg
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 Arg Pro Gln Arg Gly Pro Gly Pro Gly Gly Ser Gln Ala Met Asp Ala
 35 40 45
 Pro His Ser Lys Ala Ala Leu Asp Ser Ile Asn Glu Leu Pro Asp Asn
 50 55 60
 Ile Leu Leu Glu Leu Phe Thr His Val Pro Ala Arg Gln Leu Leu Leu
 65 70 75 80
 Asn Cys Arg Leu Val Cys Ser Leu Trp Arg Asp Leu Ile Asp Leu Leu
 85 90 95
 Thr Leu Trp Lys Arg Lys Cys Leu Arg Lys Gly Phe Ile Thr Lys Asp
 100 105 110
 Trp Asp Gln Pro Val Ala Asp Trp Lys Ile Phe Tyr Phe Leu Arg Ser
 115 120 125
 Leu His Arg Asn Leu Leu Arg Asn Pro Cys Ala Glu Asn Asp Met Phe
 130 135 140
 Ala Trp Gln Ile Asp Phe Asn Gly Gly Asp Arg Trp Lys Val Asp Ser
 145 150 155 160
 Leu Pro Gly Ala His Gly Thr Glu Phe Pro Asp Pro Lys Val Lys Lys
 165 170 175
 Ser Phe Val Thr Ser Tyr Glu Leu Cys Leu Lys Trp Glu Leu Val Asp
 180 185 190
 Leu Leu Ala Asp Arg Tyr Trp Glu Glu Leu Leu Asp Thr Phe Arg Pro
 195 200 205

Asp Ile Val Val Lys Asp Trp Phe Ala Ala Arg Ala Asp Cys Gly Cys
 210 215 220
 Thr Tyr Gln Leu Lys Val Gln Leu Ala Ser Ala Asp Tyr Phe Val Leu
 225 230 235 240
 Ala Ser Phe Glu Pro Pro Val Thr Ile Gln Gln Trp Asn Asn Ala
 245 250 255
 Thr Trp Thr Glu Val Ser Tyr Thr Phe Ser Asp Tyr Pro Arg Gly Val
 260 265 270
 Arg Tyr Ile Leu Phe Gln His Gly Gly Arg Asp Thr Gln Tyr Trp Ala
 275 280 285
 Gly Trp Tyr Gly Pro Arg Val Thr Asn Ser Ser Ile Val Val Ser Pro
 290 295 300
 Lys Met Thr Arg Asn Gln Ala Ser Ser Glu Ala Gln Pro Gly Gln Lys
 305 310 315 320
 His Gly Gln Glu Glu Ala Ala Gln Ser Pro Tyr Gly Ala Val Val Gln
 325 330 335
 Ile Phe

<210> 13
 <211> 1763
 <212> DNA
 <213> Homo sapiens

<400> 13
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 gtttgattct tcacgatgac attccaccgc ctaatatacc ttcattccaca gattcagagc 180
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 atgacgacag tatgttaggg cctagtcaaa attttgaagc tgagtcaatt caagataatg 360
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 ccaatgatgc gttgatagtg ttgatacatc ttctcatggt ggagtcagggt tacataacctc 540
 agggcaccga agccaaagca ctgtccctgc cggagaagtg gaagttgagc ggggtgtata 600
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 aaagattgca gctgctacca gaatctttta tttgcaaaga gaaactaggg gaaaatgtag 780
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cagattaaaa aaaagtgtaa att

1763

<210> 14

<211> 482

<212> PRT

<213> Homo sapiens

<400> 14

Met Ser Asn Thr Arg Phe Thr Ile Thr Leu Asn Tyr Lys Asp Pro Leu
1 5 10 15

Thr Gly Asp Glu Glu Thr Leu Ala Ser Tyr Gly Ile Val Ser Gly Asp
20 25 30

Leu Ile Cys Leu Ile Leu His Asp Asp Ile Pro Pro Pro Asn Ile Pro
35 40 45

Ser Ser Thr Asp Ser Glu His Ser Ser Leu Gln Asn Asn Glu Gln Pro
50 55 60

Ser Leu Ala Thr Ser Ser Asn Gln Thr Ser Ile Gln Asp Glu Gln Pro
65 70 75 80

Ser Asp Ser Phe Gln Gly Gln Ala Ala Gln Ser Gly Val Trp Asn Asp
85 90 95

Asp Ser Met Leu Gly Pro Ser Gln Asn Phe Glu Ala Glu Ser Ile Gln
100 105 110

Asp Asn Ala His Met Ala Glu Gly Thr Gly Phe Tyr Pro Ser Glu Pro
115 120 125

Leu Leu Cys Ser Glu Ser Val Glu Gly Gln Val Pro His Ser Leu Glu
130 135 140

Thr Leu Tyr Gln Ser Ala Asp Cys Ser Asp Ala Asn Asp Ala Leu Ile
145 150 155 160

Val Leu Ile His Leu Leu Met Leu Glu Ser Gly Tyr Ile Pro Gln Gly
165 170 175

Thr Glu Ala Lys Ala Leu Ser Leu Pro Glu Lys Trp Lys Leu Ser Gly
180 185 190

Val Tyr Lys Leu Gln Tyr Met His His Leu Cys Glu Gly Ser Ser Ala
195 200 205

Thr Leu Thr Cys Val Pro Leu Gly Asn Leu Ile Val Val Asn Ala Thr
210 215 220

Leu Lys Ile Asn Asn Glu Ile Arg Ser Val Lys Arg Leu Gln Leu Leu
225 230 235 240

Pro Glu Ser Phe Ile Cys Lys Glu Lys Leu Gly Glu Asn Val Ala Asn
245 250 255

Ile Tyr Lys Asp Leu Gln Lys Leu Ser Arg Leu Phe Lys Asp Gln Leu
260 265 270

Val Tyr Pro Leu Leu Ala Phe Thr Arg Gln Ala Leu Asn Leu Pro Asn
275 280 285

Val Phe Gly Leu Val Val Leu Pro Leu Glu Leu Lys Leu Arg Ile Phe

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290

295

300

Arg Leu Leu Asp Val Arg Ser Val Leu Ser Leu Ser Ala Val Cys Arg
305 310 315 320

Asp Leu Phe Thr Ala Ser Asn Asp Pro Leu Leu Trp Arg Phe Leu Tyr
325 330 335

Leu Arg Asp Phe Arg Asp Asn Thr Val Arg Val Gln Asp Thr Asp Trp
340 345 350

Lys Glu Leu Tyr Arg Lys Arg His Ile Gln Arg Lys Glu Ser Pro Lys
355 360 365

Gly Arg Phe Val Leu Leu Leu Pro Ser Ser Thr His Thr Ile Pro Phe
370 375 380

Tyr Pro Asn Pro Leu His Pro Arg Pro Phe Pro Ser Ser Arg Leu Pro
385 390 395 400

Pro Gly Ile Ile Gly Gly Glu Tyr Asp Gln Arg Pro Thr Leu Pro Tyr
405 410 415

Val Gly Asp Pro Ile Ser Ser Leu Ile Pro Gly Pro Gly Glu Thr Pro
420 425 430

Ser Gln Leu Pro Pro Leu Arg Pro Arg Phe Asp Pro Val Gly Pro Leu
435 440 445

Pro Gly Pro Asn Pro Ile Leu Pro Gly Arg Gly Gly Pro Asn Asp Arg
450 455 460

Phe Pro Phe Arg Pro Ser Arg Gly Arg Pro Thr Asp Gly Arg Leu Ser
465 470 475 480

Phe Met

<210> 15
<211> 43
<212> PRT
<213> Homo sapiens

<400> 15
Leu Pro Ala Arg Gly Leu Asp His Ile Ala Glu Asn Ile Leu Ser Tyr
1 5 10 15

Leu Asp Ala Lys Ser Leu Cys Ala Ala Glu Leu Val Cys Lys Glu Trp
20 25 30

Tyr Arg Val Thr Ser Asp Gly Met Leu Trp Lys
35 40

<210> 16
<211> 40
<212> PRT
<213> Homo sapiens

<400> 16
Leu Pro Leu Glu Leu Ser Phe Tyr Leu Leu Lys Trp Leu Asp Pro Gln
1 5 10 15

Thr Leu Leu Thr Cys Cys Leu Val Ser Lys Gln Trp Asn Lys Val Ile
20 25 30

Ser Ala Cys Thr Glu Val Trp Gln
35 40

<210> 17
<211> 39
<212> PRT
<213> Homo sapiens

<400> 17
Leu Leu Gln Asp Ile Ile Leu Gln Val Phe Lys Tyr Leu Pro Leu Leu
1 5 10 15

Asp Arg Ala His Ala Ser Gln Val Cys Arg Asn Trp Asn Gln Val Phe
20 25 30

His Met Pro Asp Leu Trp Arg
35

<210> 18
<211> 39
<212> PRT
<213> Homo sapiens

<400> 18
Leu Pro Ile Asp Val Gln Leu Tyr Ile Leu Ser Phe Leu Ser Pro His
1 5 10 15

Asp Leu Cys Gln Leu Gly Ser Thr Asn His Tyr Trp Asn Glu Thr Val
20 25 30

Arg Asn Pro Ile Leu Trp Arg
35

<210> 19
<211> 39
<212> PRT
<213> Homo sapiens

<400> 19
Leu Arg His Val Leu Ala Thr Ile Leu Ala Gln Leu Ser Asp Met Asp
1 5 10 15

Leu Ile Asn Val Ser Lys Val Ser Thr Trp Lys Lys Ile Leu Glu
20 25 30

Asp Asp Lys Gly Ala Phe Gln
35

<210> 20
<211> 40
<212> PRT
<213> Homo sapiens

<400> 20
Leu Pro Asp Asn Ile Leu Leu Glu Leu Phe Thr His Val Pro Ala Arg
1 5 10 15

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Gln Leu Leu Leu Asn Cys Arg Leu Val Cys Ser Leu Trp Arg Asp Leu
20 25 30

Ile Asp Leu Leu Thr Leu Trp Lys
35 40

<210> 21
<211> 39
<212> PRT
<213> Homo sapiens

<400> 21
Leu Pro Leu Glu Leu Lys Leu Arg Ile Phe Arg Leu Leu Asp Val Arg
1 5 10 15

Ser Val Leu Ser Leu Ser Ala Val Cys Arg Asp Leu Phe Thr Ala Ser
20 25 30

Asn Asp Pro Leu Leu Trp Arg
35

<210> 22
<211> 39
<212> PRT
<213> Homo sapiens

<400> 22
Leu Pro Asp Glu Leu Leu Leu Gly Ile Phe Ser Cys Leu Cys Leu Pro
1 5 10 15

Glu Leu Leu Lys Val Ser Gly Val Cys Lys Arg Trp Tyr Arg Leu Ala
20 25 30

Ser Asp Glu Ser Leu Trp Gln
35

<210> 23
<211> 1323
<212> DNA
<213> Homo sapiens

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catacacaca cggttcttct agactggggg agtttgctc accatgtagt attacaaatt 180
tttcagtatc ttcctttact agatcggggc tgtgcatctt ctgtatgtag gaggtggaat 240
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<210> 24
 <211> 434
 <212> PRT
 <213> Homo sapiens

<400> 24
 Met Lys Arg Asn Ser Leu Ser Val Glu Asn Lys Ile Val Gln Leu Ser
 1 5 10 15
 Gly Ala Ala Lys Gln Pro Lys Val Gly Phe Tyr Ser Ser Leu Asn Gln
 20 25 30
 Thr His Thr His Thr Val Leu Leu Asp Trp Gly Ser Leu Pro His His
 35 40 45
 Val Val Leu Gln Ile Phe Gln Tyr Leu Pro Leu Leu Asp Arg Ala Cys
 50 55 60
 Ala Ser Ser Val Cys Arg Arg Trp Asn Glu Val Phe His Ile Ser Asp
 65 70 75 80
 Leu Trp Arg Lys Phe Glu Phe Glu Leu Asn Gln Ser Ala Thr Ser Ser
 85 90 95
 Phe Lys Ser Thr His Pro Asp Leu Ile Gln Gln Ile Ile Lys Lys His
 100 105 110
 Phe Ala His Leu Gln Tyr Val Ser Phe Lys Val Asp Ser Ser Ala Glu
 115 120 125
 Ser Ala Glu Ala Ala Cys Asp Ile Leu Ser Gln Leu Val Asn Cys Ser
 130 135 140
 Ile Gln Thr Leu Gly Leu Ile Ser Thr Ala Lys Pro Ser Phe Met Asn
 145 150 155 160
 Val Ser Glu Ser His Phe Val Ser Ala Leu Thr Val Val Phe Ile Asn
 165 170 175
 Ser Lys Ser Leu Ser Ser Ile Lys Ile Glu Asp Thr Pro Val Asp Asp
 180 185 190
 Pro Ser Leu Lys Ile Leu Val Ala Asn Asn Ser Asp Thr Leu Arg Leu
 195 200 205
 Pro Lys Met Ser Ser Cys Pro His Val Ser Ser Asp Gly Ile Leu Cys
 210 215 220
 Val Ala Asp Arg Cys Gln Gly Leu Arg Glu Leu Ala Leu Asn Tyr Tyr
 225 230 235 240
 Ile Leu Thr Asp Glu Leu Phe Leu Ala Leu Ser Ser Glu Thr His Val
 245 250 255
 Asn Leu Glu His Leu Arg Ile Asp Val Val Ser Glu Asn Pro Gly Gln
 260 265 270

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Ile Lys Phe His Ala Val Lys Lys His Ser Trp Asp Ala Leu Ile Lys
 275 280 285
 His Ser Pro Arg Val Asn Val Val Met His Phe Phe Leu Tyr Glu Glu
 290 295 300
 Glu Phe Glu Thr Phe Phe Lys Glu Glu Thr Pro Val Thr His Leu Tyr
 305 310 315 320
 Phe Gly Arg Ser Val Ser Lys Val Val Leu Gly Arg Val Gly Leu Asn
 325 330 335
 Cys Pro Arg Leu Ile Glu Leu Val Val Cys Ala Asn Asp Leu Gln Pro
 340 345 350
 Leu Asp Asn Glu Leu Ile Cys Ile Ala Glu His Cys Thr Asn Leu Thr
 355 360 365
 Ala Leu Gly Leu Ser Lys Cys Glu Val Ser Cys Ser Ala Phe Ile Arg
 370 375 380
 Phe Val Arg Leu Cys Glu Arg Arg Leu Thr Gln Leu Ser Val Met Glu
 385 390 395 400
 Glu Val Leu Ile Pro Asp Glu Asp Tyr Ser Leu Asp Glu Ile His Thr
 405 410 415
 Glu Val Ser Lys Tyr Leu Gly Arg Val Trp Phe Pro Asp Val Met Pro
 420 425 430
 Leu Trp

<210> 25
 <211> 1970
 <212> DNA
 <213> Homo sapiens

<400> 25
 ggaaacgtca aaattgggat agtcggcagt tctggccct gcagctggag gtaccctgag 60
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 caagtaaagt ttgaatcagc ttctccatgg cctgggcacc agttccgggc tgagccattt 180
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 35 40 45
 Leu Gly Thr Ser Ser Arg Leu Ser His Phe Pro Phe Gly Lys Ser Pro
 50 55 60
 Pro Arg Gly Gln Phe Val Ala Ala Ala Val Glu Ile Ala Gly Arg Ser
 65 70 75 80
 Gly Leu Gln Met Gly Gln Gly Leu Trp Arg Val Val Arg Asn Gln Gln
 85 90 95
 Leu Gln Gln Glu Gly Tyr Ser Glu Gln Gly Tyr Leu Thr Arg Glu Gln
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 Ser Arg Arg Met Ala Ala Ser Asn Ile Ser Asn Thr Asn His Arg Lys
 115 120 125
 Gln Val Gln Gly Gly Ile Asp Ile Tyr His Leu Leu Lys Ala Arg Lys
 130 135 140
 Ser Lys Glu Gln Glu Gly Phe Ile Asn Leu Glu Met Leu Pro Pro Glu
 145 150 155 160
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 Ala Ser Cys Val Trp Gln Asp Leu Ala Asn Asp Glu Leu Leu Trp Gln
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 Gly Leu Cys Lys Ser Thr Trp Gly His Cys Ser Ile Tyr Asn Lys Asn
 195 200 205
 Pro Pro Leu Gly Phe Ser Phe Arg Lys Xaa Tyr Met Gln Leu Asp Glu
 210 215 220

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Gly Ser Leu Thr Phe Asn Ala Asn Pro Asp Glu Gly Val Asn Tyr Phe
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 Met Ser Lys Gly Ile Leu Asp Asp Ser Pro Lys Glu Ile Ala Lys Phe
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 Ile Phe Cys Thr Arg Thr Leu Asn Trp Lys Lys Leu Arg Ile Tyr Leu
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 275 280 285
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 His Ala Pro Glu Glu Arg Gly Glu Tyr Leu Glu Thr Leu Ile Thr Lys
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 370 375 380
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 Ala Thr Gln Gly Leu Ser Arg Tyr Gly Gly Tyr Ile Ser Ala Gly His
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 His Ser Cys Arg Met Ile Asn His Tyr Thr Leu Lys Asp Gly Val Phe
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 Val His Ile Cys Leu Lys Asn Phe Ile His Phe His Ser Leu Tyr Lys
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 Tyr His Val Met Cys Thr Tyr Leu Thr Lys Glu Ile Tyr Ser His Asn
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 Val Leu Lys Phe Ile Phe Ser Glu Thr Ile Val Xaa Val Lys Val Arg
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Ser Asp Phe Arg Gln Lys Pro Ile Pro Ala Ser Phe Ser Phe Lys Leu
565 570 575

Arg Val Leu Ile Cys Tyr Tyr Ile Thr Met Gln Asn Trp Gln Leu Phe
580 585 590

Leu Tyr Lys Phe Ile Ile Phe Phe Ile Leu Lys Thr Gly Leu Ile Lys
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Ser Arg Val Leu Thr Ile Asp Phe Asn Ile Lys Ile Tyr Asp Leu His
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Ser Glu Asn Lys Ile Xaa Leu Glu Leu Trp
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<210> 27
<211> 4168
<212> DNA
<213> Homo sapiens

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 <211> 621
 <212> PRT
 <213> Homo sapiens

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 Leu Pro Gly Glu Val Leu Glu Tyr Ile Leu Cys Cys Gly Ser Leu Thr
 35 40 45
 Ala Ala Asp Ile Gly Arg Val Ser Ser Thr Cys Arg Arg Leu Arg Glu
 50 55 60
 Leu Cys Gln Ser Ser Gly Lys Val Trp Lys Glu Gln Phe Arg Val Arg
 65 70 75 80
 Trp Pro Ser Leu Met Lys His Tyr Ser Pro Thr Asp Tyr Val Asn Trp
 85 90 95
 Leu Glu Glu Tyr Lys Val Arg Gln Lys Ala Gly Leu Glu Ala Arg Lys
 100 105 110
 Ile Val Ala Ser Phe Ser Lys Arg Phe Phe Ser Glu His Val Pro Cys
 115 120 125
 Asn Gly Phe Ser Asp Ile Glu Asn Leu Glu Gly Pro Glu Ile Phe Phe
 130 135 140

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Glu	Asp	Glu	Leu	Val	Cys	Ile	Leu	Asn	Met	Glu	Gly	Arg	Lys	Ala	Leu	145		150		155		160
Thr	Trp	Lys	Tyr	Tyr	Ala	Lys	Lys	Ile	Leu	Tyr	Tyr	Leu	Arg	Gln	Gln		165		170			175
Lys	Ile	Leu	Asn	Asn	Leu	Lys	Ala	Phe	Leu	Gln	Gln	Pro	Asp	Asp	Tyr		180		185		190	
Glu	Ser	Tyr	Leu	Glu	Gly	Ala	Val	Tyr	Ile	Asp	Gln	Tyr	Cys	Asn	Pro		195		200		205	
Leu	Ser	Asp	Ile	Ser	Leu	Lys	Asp	Ile	Gln	Ala	Gln	Ile	Asp	Ser	Ile		210		215		220	
Val	Glu	Leu	Val	Cys	Lys	Thr	Leu	Arg	Gly	Ile	Asn	Ser	Arg	His	Pro		225		230		235	
Ser	Leu	Ala	Phe	Lys	Ala	Gly	Glu	Ser	Ser	Met	Ile	Met	Glu	Ile	Glu			245		250		255
Leu	Gln	Ser	Gln	Val	Leu	Asp	Ala	Met	Asn	Tyr	Val	Leu	Tyr	Asp	Gln			260		265		270
Leu	Lys	Phe	Lys	Gly	Asn	Arg	Met	Asp	Tyr	Tyr	Asn	Ala	Leu	Asn	Leu			275		280		285
Tyr	Met	His	Gln	Val	Leu	Ile	Arg	Arg	Thr	Gly	Ile	Pro	Ile	Ser	Met		290		295		300	
Ser	Leu	Leu	Tyr	Leu	Thr	Ile	Ala	Arg	Gln	Leu	Gly	Val	Pro	Leu	Glu		305		310		315	
Pro	Val	Asn	Phe	Pro	Ser	His	Phe	Leu	Leu	Arg	Trp	Cys	Gln	Gly	Ala			325		330		335
Glu	Gly	Ala	Thr	Leu	Asp	Ile	Phe	Asp	Tyr	Ile	Tyr	Ile	Asp	Ala	Phe			340		345		350
Gly	Lys	Gly	Lys	Gln	Leu	Thr	Val	Lys	Glu	Cys	Glu	Tyr	Leu	Ile	Gly			355		360		365
Gln	His	Val	Thr	Ala	Ala	Leu	Tyr	Gly	Val	Val	Asn	Val	Lys	Lys	Val		370		375		380	
Leu	Gln	Arg	Met	Val	Gly	Asn	Leu	Leu	Ser	Leu	Gly	Lys	Arg	Glu	Gly		385		390		395	
Ile	Asp	Gln	Ser	Tyr	Gln	Leu	Leu	Arg	Asp	Ser	Leu	Asp	Leu	Tyr	Leu			405		410		415
Ala	Met	Tyr	Pro	Asp	Gln	Val	Gln	Leu	Leu	Leu	Leu	Gln	Ala	Arg	Leu			420		425		430
Tyr	Phe	His	Leu	Gly	Ile	Trp	Pro	Glu	Lys	Val	Leu	Asp	Ile	Leu	Gln			435		440		445
His	Ile	Gln	Thr	Leu	Asp	Pro	Gly	Gln	His	Gly	Ala	Val	Gly	Tyr	Leu		450		455		460	
Val	Gln	His	Thr	Leu	Glu	His	Ile	Glu	Arg	Lys	Lys	Glu	Glu	Val	Gly		465		470		475	

Val Glu Val Lys Leu Arg Ser Asp Glu Lys His Arg Asp Val Cys Tyr
485 490 495

Ser Ile Gly Leu Ile Met Lys His Lys Arg Tyr Gly Tyr Asn Cys Val
500 505 510

Ile Tyr Gly Trp Asp Pro Thr Cys Met Met Gly His Glu Trp Ile Arg
515 520 525

Asn Met Asn Val His Ser Leu Pro His Gly His His Gln Pro Phe Tyr
530 535 540

Asn Val Leu Val Glu Asp Gly Ser Cys Arg Tyr Ala Ala Gln Glu Asn
545 550 555 560

Leu Glu Tyr Asn Val Glu Pro Gln Glu Ile Ser His Pro Asp Val Gly
565 570 575

Arg Tyr Phe Ser Glu Phe Thr Gly Thr His Tyr Ile Pro Asn Ala Glu
580 585 590

Leu Glu Ile Arg Tyr Pro Glu Asp Leu Glu Phe Val Tyr Glu Thr Val
595 600 605

Gln Asn Ile Tyr Ser Ala Lys Lys Glu Asn Ile Asp Glu
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<211> 278
<212> DNA
<213> Homo sapiens

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<223> n=a, c, g or t

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ggagcgtgtg ctcaccttcc tgcccgccaa ggcgttgctg cgggtggcct gcgtgtgccg 180
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<212> PRT
<213> Homo sapiens

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<223> Xaa=unknown amino acid residue

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20 25 30

Ser Asn Leu Ala Glu Val Val Glu Arg Val Leu Thr Phe Leu Pro Ala

35 40 45

Lys Ala Leu Leu Arg Val Ala Cys Val Cys Arg Leu Trp Arg Glu Cys
50 55 60

Val Arg Arg Val Leu Arg Thr His Arg Ser Val Thr Trp Ile Ser Ala
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Gly Leu Ala Glu Ala Gly His Leu Xaa Gly His
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<212> DNA
<213> Homo sapiens

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<211> 197
<212> PRT
<213> Homo sapiens

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Pro Pro Gln Gln Gln Gln Gln Gln Gln Pro Pro Pro Pro Pro Pro Pro
35 40 45

Pro Pro Pro Leu Pro Gln Glu Arg Asn Asn Val Gly Glu Arg Asp Asp
50 55 60

Asp Val Pro Ala Asp Met Val Ala Glu Glu Ser Gly Pro Gly Ala Gln
65 70 75 80

Asn Ser Pro Tyr Gln Leu Arg Arg Lys Thr Leu Leu Pro Lys Arg Thr
85 90 95

Ala Cys Pro Thr Lys Asn Ser Met Glu Gly Ala Ser Thr Ser Thr Thr
100 105 110

Glu Asn Phe Gly His Arg Ala Lys Arg Ala Arg Val Ser Gly Lys Ser
115 120 125

Gln Asp Leu Ser Ala Ala Pro Ala Glu Gln Tyr Leu Gln Glu Lys Leu
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<213> Homo sapiens
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<211> 178
<212> PRT
<213> Homo sapiens
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- 27 -

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Leu Gly

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 <212> DNA
 <213> Homo sapiens

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 cagctatcaa gtcgatgatcc gctgtggaga agacattgca aaaaatactg gctgatatct 180
 gaggaagaga aaacacagaa gaatcagtgt tggaaatctc tcttcataga tacttactct 240
 gatgtaggaa gatacattga ccattatgct gctattaaaa aggcctcggg aatgatctca 300
 agaaatattt ggagcccagg tgcctcggga tgggttttat ctctgaaaga ggggtgctcg 360
 agaggaagac ctcgatgctg tgggaagcgca gattgggctg caagtttcct ggacgattat 420
 cgatgttcat accgaattca caatggacag aagttagttg gttcctgggg ttattgggaa 480
 gcatggcact gtctaatacac tatcgttctg aagatttggt agacgtcgat acagctgccg 540
 gagattccag cagagacagg gactgaaata ctgtctccct ttaacttttg catacatact 600
 ggtttgagtc agtacatagc agtggaaagct gcagaggggt gaaacaaaaa tgaagtttct 660
 taccaatgtc agacagtaga acgtgtgttt aaatatggca ttaagatgtg ttctgatggt 720
 tgtataaatg gcatgcatta ggtattttca g 751

<210> 36
 <211> 247
 <212> PRT
 <213> Homo sapiens

<400> 36
 Glu Thr Glu Thr Ala Pro Leu Thr Leu Glu Ser Leu Pro Thr Asp Pro
 1 5 10 15
 Leu Leu Leu Ile Leu Ser Phe Leu Asp Tyr Arg Asp Leu Ile Asn Cys
 20 25 30
 Cys Tyr Val Ser Arg Arg Leu Ser Gln Leu Ser Ser His Asp Pro Leu
 35 40 45
 Trp Arg Arg His Cys Lys Lys Tyr Trp Leu Ile Ser Glu Glu Glu Lys
 50 55 60
 Thr Gln Lys Asn Gln Cys Trp Lys Ser Leu Phe Ile Asp Thr Tyr Ser
 65 70 75 80
 Asp Val Gly Arg Tyr Ile Asp His Tyr Ala Ala Ile Lys Lys Ala Ser
 85 90 95
 Gly Met Ile Ser Arg Asn Ile Trp Ser Pro Gly Val Leu Gly Trp Val
 100 105 110
 Leu Ser Leu Lys Glu Gly Cys Ser Arg Gly Arg Pro Arg Cys Cys Gly
 115 120 125
 Ser Ala Asp Trp Ala Ala Ser Phe Leu Asp Asp Tyr Arg Cys Ser Tyr
 130 135 140
 Arg Ile His Asn Gly Gln Lys Leu Val Gly Ser Trp Gly Tyr Trp Glu
 145 150 155 160

Ala Trp His Cys Leu Ile Thr Ile Val Leu Lys Ile Cys Thr Ser Ile
165 170 175

Gln Leu Pro Glu Ile Pro Ala Glu Thr Gly Thr Glu Ile Leu Ser Pro
180 185 190

Phe Asn Phe Cys Ile His Thr Gly Leu Ser Gln Tyr Ile Ala Val Glu
195 200 205

Ala Ala Glu Gly Asn Lys Asn Glu Val Phe Tyr Gln Cys Gln Thr Val
210 215 220

Glu Arg Val Phe Lys Tyr Gly Ile Lys Met Cys Ser Asp Gly Cys Ile
225 230 235 240

Asn Gly Met His Val Phe Ser
245

<210> 37
<211> 368
<212> DNA
<213> Homo sapiens

<220>
<221> modified_base
<222> all n positions
<223> n=a, c, g or t

<400> 37
ggctccggtt tccgggcccgg cgggtggccg ctcaccatgc ccggaagca ccagcatttc 60
caggaacctg aggtcggctg ctgcgggaaa tacttcctgt ttggcttcaa cattgtcttc 120
tgggtgctgg gagccctgtt cctggctatc ggccctctgg cctggggtga gaagggcggt 180
ctctcgaaca tctcagcgct gacagatctg ggaggccttg accccgtgtg gcttgtttgt 240
ggtagttgga ggcgtcatgt cgggtgctggg ctttgctggg ctgcaattgg ggccctccgg 300
gagaacacct tcctgctcaa gttttctcnc gngttcctcg gtctcatctt cttcctggag 360
ctggcaac 368

<210> 38
<211> 122
<212> PRT
<213> Homo sapiens

<220>
<221> SITE
<222> all Xaa positions
<223> Xaa=unknown amino acid residue

<400> 38
Gly Ser Gly Phe Arg Ala Gly Gly Trp Pro Leu Thr Met Pro Gly Lys
1 5 10 15

His Gln His Phe Gln Glu Pro Glu Val Gly Cys Cys Gly Lys Tyr Phe
20 25 30

Leu Phe Gly Phe Asn Ile Val Phe Trp Val Leu Gly Ala Leu Phe Leu
35 40 45

Ala Ile Gly Leu Trp Ala Trp Gly Glu Lys Gly Val Leu Ser Asn Ile
50 55 60

Ser Ala Leu Thr Asp Leu Gly Gly Leu Asp Pro Val Trp Leu Val Cys
65 70 75 80

Gly Ser Trp Arg Arg His Val Gly Ala Gly Leu Cys Trp Ala Ala Ile
85 90 95

Gly Ala Leu Arg Glu Asn Thr Phe Leu Leu Lys Phe Phe Xaa Xaa Phe
100 105 110

Leu Gly Leu Ile Phe Phe Leu Glu Leu Ala
115 120

<210> 39
<211> 774
<212> DNA
<213> Homo sapiens

<400> 39
gcggcgccgc cgcgcgcgta cctggacgag ctgcccgcgc cgctgctgct gcgcgtgctg 60
gccgcactgc cggccgcccga gctgggtgcag gcctgcccgc tgggtgtgcct gcgcgtggaag 120
gagctgggtgg acggcgcccc gctgtggctg ctcaagtgcc agcaggaggg gctgggtgccc 180
gagggcgccgc tggaggagga gcgcgaccac tggcagcagt tctacttcct gagcaagcgg 240
cgccgcacac ttctgcgtaa cccgtgtggg gaagaggact tggaggctg gtgtgacgtg 300
gagcatgggtg gggacggctg gaggggtggag gagctgcctg gagacagtgg ggtggagttc 360
acccacgatg agagcgtcaa gaagtaattc gcctcctcct ttgagtgggtg tcgcaaagca 420
caggtcattg acctgcaggc tgagggttac tgggaggagc tgctggacac gactcagccg 480
gccatcgctgg tgaaggactg gtactcgggc cgcagcgacg ctggttgctt ctacgagctc 540
accgttaagc tactgtccga gcacgagaa gtgctggctg agttcagcag cgggcagggtg 600
gcagtgcgcc aagacagtga cggcgggggc tggatggaga tctcccacac cttaccgac 660
tacggggccg gcgtccgctt cgtccgcttc gagcacgggg ggacagggtc cgtctactgg 720
aagggtcgtg tcgggggccg ggtgaccaac agcagcgtgt gggtagaacc ctga 774

<210> 40
<211> 257
<212> PRT
<213> Homo sapiens

<400> 40
Ala Ala Ala Ala Ala Tyr Leu Asp Glu Leu Pro Glu Pro Leu Leu
1 5 10 15
Leu Arg Val Leu Ala Ala Leu Pro Ala Ala Glu Leu Val Gln Ala Cys
20 25 30
Arg Leu Val Cys Leu Arg Trp Lys Glu Leu Val Asp Gly Ala Pro Leu
35 40 45
Trp Leu Leu Lys Cys Gln Gln Glu Gly Leu Val Pro Glu Gly Gly Val
50 55 60
Glu Glu Glu Arg Asp His Trp Gln Gln Phe Tyr Phe Leu Ser Lys Arg
65 70 75 80
Arg Arg Asn Leu Leu Arg Asn Pro Cys Gly Glu Glu Asp Leu Glu Gly
85 90 95
Trp Cys Asp Val Glu His Gly Gly Asp Gly Trp Arg Val Glu Glu Leu
100 105 110
Pro Gly Asp Ser Gly Val Glu Phe Thr His Asp Glu Ser Val Lys Lys
115 120 125
Tyr Phe Ala Ser Ser Phe Glu Trp Cys Arg Lys Ala Gln Val Ile Asp
130 135 140

Leu Gln Ala Glu Gly Tyr Trp Glu Glu Leu Leu Asp Thr Thr Gln Pro
 145 150 155 160
 Ala Ile Val Val Lys Asp Trp Tyr Ser Gly Arg Ser Asp Ala Gly Cys
 165 170 175
 Leu Tyr Glu Leu Thr Val Lys Leu Leu Ser Glu His Glu Asn Val Leu
 180 185 190
 Ala Glu Phe Ser Ser Gly Gln Val Ala Val Pro Gln Asp Ser Asp Gly
 195 200 205
 Gly Gly Trp Met Glu Ile Ser His Thr Phe Thr Asp Tyr Gly Pro Gly
 210 215 220
 Val Arg Phe Val Arg Phe Glu His Gly Gly Gln Gly Ser Val Tyr Trp
 225 230 235 240
 Lys Gly Trp Phe Gly Ala Arg Val Thr Asn Ser Ser Val Trp Val Glu
 245 250 255

Pro

<210> 41
 <211> 957
 <212> DNA
 <213> Homo sapiens

<400> 41
 atgggcgaga aggcgggtccc tttgctaagg aggaggcggg tgaagagaag ctgcccttct 60
 tgtggctcgg agcttggggg tgaagagaag agggggaaaag gaaatccgat ttccatccag 120
 ttgttcccc cagagctggg ggagcatatc atctcattcc tcccagtcag agaccttggt 180
 gccctcggcc agacctgccc ctacttccac gaagtgtgcg atggggaagg cgtgtggaga 240
 cgcactgtgc gcagactcag tccgcgcctc caagatcagg acacgaaggg cctgtatttc 300
 caggcatttg gaggccgccg ccgatgtctc agcaagagcg tggccccctt gctagcccac 360
 ggctaccgcc gcttcttgcc caccaaggat cacgtcttca ttcttgacta cgtggggacc 420
 ctcttcttcc tcaaaaatgc cctgggtctcc accctcggcc agatgcagtg gaagcggggc 480
 tgtcgctatg ttgtgttggt tcgtggagcc aaggattttg cctcggatcc aaggtgtgac 540
 acagtttacc gtaaatacct ctacgtcttg gccactcggg agccgcagga agtgggtggg 600
 accaccagca gccgggcttg tgactgtggt gaggtctatc tgcagtctag tgggcagcgg 660
 gtcttcaaga tgacattcca ccaactcaatg accttcaagc agatcgtgct ggttggtcag 720
 gagaccagc gggctctact gctcctcaca gaggaaggaa agatctactc ttgggtagt 780
 aatgagacc agcttgacca gccacgctcc tacacggttc agctggccct gaggaagggt 840
 tcccactacc tgcctcacct gcgcgtggcc tgcattgact ccaaccagag cagaccctc 900
 tacgtcacag atcctattct gtgctcttgg ctacaaccac cttggcctgg tggatga 957

<210> 42
 <211> 318
 <212> PRT
 <213> Homo sapiens

<400> 42
 Met Gly Glu Lys Ala Val Pro Leu Leu Arg Arg Arg Arg Val Lys Arg
 1 5 10 15
 Ser Cys Pro Ser Cys Gly Ser Glu Leu Gly Val Glu Glu Lys Arg Gly
 20 25 30
 Lys Gly Asn Pro Ile Ser Ile Gln Leu Phe Pro Pro Glu Leu Val Glu
 35 40 45

His Ile Ile Ser Phe Leu Pro Val Arg Asp Leu Val Ala Leu Gly Gln
 50 55 60
 Thr Cys Arg Tyr Phe His Glu Val Cys Asp Gly Glu Gly Val Trp Arg
 65 70 75 80
 Arg Ile Cys Arg Arg Leu Ser Pro Arg Leu Gln Asp Gln Asp Thr Lys
 85 90 95
 Gly Leu Tyr Phe Gln Ala Phe Gly Gly Arg Arg Arg Cys Leu Ser Lys
 100 105 110
 Ser Val Ala Pro Leu Leu Ala His Gly Tyr Arg Arg Phe Leu Pro Thr
 115 120 125
 Lys Asp His Val Phe Ile Leu Asp Tyr Val Gly Thr Leu Phe Phe Leu
 130 135 140
 Lys Asn Ala Leu Val Ser Thr Leu Gly Gln Met Gln Trp Lys Arg Ala
 145 150 155 160
 Cys Arg Tyr Val Val Leu Cys Arg Gly Ala Lys Asp Phe Ala Ser Asp
 165 170 175
 Pro Arg Cys Asp Thr Val Tyr Arg Lys Tyr Leu Tyr Val Leu Ala Thr
 180 185 190
 Arg Glu Pro Gln Glu Val Val Gly Thr Thr Ser Ser Arg Ala Cys Asp
 195 200 205
 Cys Val Glu Val Tyr Leu Gln Ser Ser Gly Gln Arg Val Phe Lys Met
 210 215 220
 Thr Phe His His Ser Met Thr Phe Lys Gln Ile Val Leu Val Gly Gln
 225 230 235 240
 Glu Thr Gln Arg Ala Leu Leu Leu Leu Thr Glu Glu Gly Lys Ile Tyr
 245 250 255
 Ser Leu Val Val Asn Glu Thr Gln Leu Asp Gln Pro Arg Ser Tyr Thr
 260 265 270
 Val Gln Leu Ala Leu Arg Lys Val Ser His Tyr Leu Pro His Leu Arg
 275 280 285
 Val Ala Cys Met Thr Ser Asn Gln Ser Ser Thr Leu Tyr Val Thr Asp
 290 295 300
 Pro Ile Leu Cys Ser Trp Leu Gln Pro Pro Trp Pro Gly Gly
 305 310 315

<210> 43
 <211> 1590
 <212> DNA
 <213> Homo sapiens

<400> 43
 cgaggggggaa gcgaaggaag gggaagagga agggaaaagc gagcgagagg ggcaaggcgg 60
 aagaggaagc agggcggaag ggaagcccg gcccagacg gcgaaggagg cagcgggccc 120
 ggggctgagg cgggagcgag gacacgcca agagaggaag cagagggagg cggaagcgtg 180
 gaggaagggg cgagaggcat catcaaagga gatgagggga gcgtaggggc cgggaaagag 240
 gcacaaggaa gaaagtatgg gaaggaggaa tggagggtca gggctaggcg gcgggagggc 300

MS
 B51

gccaggccgg gaagagtaca aggacaagga ggtcaggttt gggcctacat cccggggaca 360
 gggggcggcca tggcggcggc agccagggag gaggaggagg aggcggctcg ggagtcagcc 420
 gcctgcggcga ctgcggggcc agcgctctgg cgcctgcccg aagtgtctgt gctgcacatg 480
 tgctcctacc tcgacatgcg ggccctcggc cgcttgcccc aggtgtaccg ctggctgtgg 540
 cacttcacca actgcgacct gctccggcgc cagatagcct gggcctcgt caactccggc 600
 ttcacgcggc tgggcaccaa cctgatgacc agtgtcccag tgaaggtgtc tcagaactgg 660
 atagtggggg gctgccgaga ggggattctg ctgaagtggg gatgcagtca gatgccctgg 720
 atgcagctag aggtgatgc tttgtacata tcccaggcta atttcacct ggcctaccag 780
 ttccgtccag atggggccag cttgaaccgt cagcctctgg gagtctctgc tgggcatgat 840
 gaggacgttt gccactttgt gctggccacc tcgcatattg tcagtgcagg aggagatggg 900
 aagattggcc ttggtaagat tcacagcacc ttcgctgcca agtactgggc tcatgaacag 960
 gaggtgaact gtgtggattg caaagggggc atcatatcat ttggctccag ggacaggacg 1020
 gccaaaggtgt ggcctttggc ctcaggccag ctggggcagt gtttatacac catccagact 1080
 gaagacaaaa tctggtctgt tgctatcagg ccattactca gctcttttgt gacagggacg 1140
 gcttgttgtt ggcacttctc acccctgaaa atctgggacc tcaacagtgg gcagctgatg 1200
 acacacttgg acagagactt tcccccaagg gctgggggtgc tggatgtcat atatgagtc 1260
 cctttcgcac tgctctctct tgctatgac acctatgttc gctactggga ctgccgcacc 1320
 agtgtccgga aatgtgtcat ggagtgggag gagccccaca acagcaccct gtactgcctg 1380
 cagacagatg gcaaccactt gctggccaca gggttcctct tctatagcgt tgtacggctg 1440
 tgggaccggc accaaagggc ctgcccgcac accttcccgc tgacgtcgac ccgcctcggc 1500
 agccctgtgt actgcctgca tctcaaccac aagcatctct atgctgcgct gtcttacaac 1560
 ctccacgtcc tggatattca aaaccctga 1590

<210> 44
 <211> 529
 <212> PRT
 <213> Homo sapiens

<400> 44
 Arg Gly Gly Ser Glu Gly Arg Gly Arg Gly Arg Glu Lys Arg Ala Arg
 1 5 10 15
 Gly Ala Arg Arg Lys Arg Lys Gln Gly Gly Arg Glu Ala Arg Ala Ala
 20 25 30
 Asp Gly Glu Gly Gly Ser Gly Pro Gly Ala Glu Ala Gly Ala Arg Thr
 35 40 45
 Arg Pro Arg Glu Glu Ala Glu Gly Gly Gly Ser Val Glu Glu Gly Ala
 50 55 60
 Arg Gly Ile Ile Lys Gly Asp Glu Gly Ser Val Gly Ala Gly Lys Glu
 65 70 75 80
 Ala Gln Gly Arg Lys Tyr Gly Lys Glu Glu Trp Arg Val Arg Ala Arg
 85 90 95
 Arg Arg Glu Gly Ala Arg Pro Gly Arg Val Gln Gly Gln Gly Gly Gln
 100 105 110
 Val Trp Ala Tyr Ile Pro Gly Thr Gly Ala Ala Met Ala Ala Ala Ala
 115 120 125
 Arg Glu Glu Glu Glu Glu Ala Ala Arg Glu Ser Ala Ala Cys Pro Ala
 130 135 140
 Ala Gly Pro Ala Leu Trp Arg Leu Pro Glu Val Leu Leu Leu His Met
 145 150 155 160
 Cys Ser Tyr Leu Asp Met Arg Ala Leu Gly Arg Leu Ala Gln Val Tyr
 165 170 175
 Arg Trp Leu Trp His Phe Thr Asn Cys Asp Leu Leu Arg Arg Gln Ile

1004247.010702

180										185					190						
Ala	Trp	Ala	Ser	Leu	Asn	Ser	Gly	Phe	Thr	Arg	Leu	Gly	Thr	Asn	Leu						
		195					200					205									
Met	Thr	Ser	Val	Pro	Val	Lys	Val	Ser	Gln	Asn	Trp	Ile	Val	Gly	Cys						
	210					215					220										
Cys	Arg	Glu	Gly	Ile	Leu	Leu	Lys	Trp	Arg	Cys	Ser	Gln	Met	Pro	Trp						
225					230					235					240						
Met	Gln	Leu	Glu	Asp	Asp	Ala	Leu	Tyr	Ile	Ser	Gln	Ala	Asn	Phe	Ile						
				245					250					255							
Leu	Ala	Tyr	Gln	Phe	Arg	Pro	Asp	Gly	Ala	Ser	Leu	Asn	Arg	Gln	Pro						
			260					265					270								
Leu	Gly	Val	Ser	Ala	Gly	His	Asp	Glu	Asp	Val	Cys	His	Phe	Val	Leu						
		275					280					285									
Ala	Thr	Ser	His	Ile	Val	Ser	Ala	Gly	Gly	Asp	Gly	Lys	Ile	Gly	Leu						
	290					295					300										
Gly	Lys	Ile	His	Ser	Thr	Phe	Ala	Ala	Lys	Tyr	Trp	Ala	His	Glu	Gln						
305					310					315					320						
Glu	Val	Asn	Cys	Val	Asp	Cys	Lys	Gly	Gly	Ile	Ile	Ser	Phe	Gly	Ser						
			325						330					335							
Arg	Asp	Arg	Thr	Ala	Lys	Val	Trp	Pro	Leu	Ala	Ser	Gly	Gln	Leu	Gly						
			340					345					350								
Gln	Cys	Leu	Tyr	Thr	Ile	Gln	Thr	Glu	Asp	Gln	Ile	Trp	Ser	Val	Ala						
		355					360					365									
Ile	Arg	Pro	Leu	Leu	Ser	Ser	Phe	Val	Thr	Gly	Thr	Ala	Cys	Cys	Gly						
	370					375					380										
His	Phe	Ser	Pro	Leu	Lys	Ile	Trp	Asp	Leu	Asn	Ser	Gly	Gln	Leu	Met						
385					390					395					400						
Thr	His	Leu	Asp	Arg	Asp	Phe	Pro	Pro	Arg	Ala	Gly	Val	Leu	Asp	Val						
				405					410					415							
Ile	Tyr	Glu	Ser	Pro	Phe	Ala	Leu	Leu	Ser	Cys	Gly	Tyr	Asp	Thr	Tyr						
		420						425					430								
Val	Arg	Tyr	Trp	Asp	Cys	Arg	Thr	Ser	Val	Arg	Lys	Cys	Val	Met	Glu						
		435					440					445									
Trp	Glu	Glu	Pro	His	Asn	Ser	Thr	Leu	Tyr	Cys	Leu	Gln	Thr	Asp	Gly						
	450				455						460										
Asn	His	Leu	Leu	Ala	Thr	Gly	Ser	Ser	Phe	Tyr	Ser	Val	Val	Arg	Leu						
465					470					475					480						
Trp	Asp	Arg	His	Gln	Arg	Ala	Cys	Pro	His	Thr	Phe	Pro	Leu	Thr	Ser						
				485				490						495							
Thr	Arg	Leu	Gly	Ser	Pro	Val	Tyr	Cys	Leu	His	Leu	Thr	Thr	Lys	His						
		500					505						510								
Leu	Tyr	Ala	Ala	Leu	Ser	Tyr	Asn	Leu	His	Val	Leu	Asp	Ile	Gln	Asn						

Pro

<210> 45
 <211> 1214
 <212> DNA
 <213> Homo sapiens

<400> 45
 gcattgctat aattttacta tactctcatc taaatctaaa atcagtcttc aaaataaaaa 60
 caaattgtcc ttggcaaaa atttttttaa tcgcacaatt aattgacatt aactgccaat 120
 tctttttggc taattgacta attttaactt ctgtgttgct ttccagagg catggctatt 180
 gcaccttggg agaagcctt aatcggttag acttctcaag tgcaattcaa gatatccgaa 240
 cgttcaatta tgttgtcaaa ctgttgacgc taattgcaaa atcccagtta acttcattga 300
 gtggcgtggc acagaagaat tacttcaaca ttttgataa aatcgttcaa aaggttcttg 360
 atgaccacca caatcctcgc ttaatcaaag atcttctgca agacctaagc tctaccctct 420
 gcattcttat tagaggagta ggaagtctg tattagtggg aaacatcaat atttggattt 480
 gccgattaga aactattctc gctggcaac aacagctaca ggatcttcag atgactaagc 540
 aagtgaacaa tggcctcacc ctgagtgacc ttcctctgca catgctgaac aacatcctat 600
 accggttctc agacggatgg gacatcatca ccttaggcca ggtgacccc acgttgata 660
 tgcttagtga agacagacag ctgtggaaga agctttgtca gtaccatttt gctgaaaagc 720
 agttttgtag acatttgatc ctttcagaaa aaggtcatat tgaatggaag ttgatgtact 780
 ttgcattca gaaacattac ccagcgaagg agcagtacgg agacacactg catttctgtc 840
 ggcactgcag cattctcttt tgggaaggact caggacacc ctgcacggcg gccgacctg 900
 acagctgctt cagcctgtg tctccgcagc acttcatcga cctcttcaag ttttaagggc 960
 tgccccctgcc atccctattg gagattgtga atcctgctgt ctgtgcaggg ctcatagtga 1020
 gtgttctgtg aggtgggtgg agactcctcg gaagcccctg cttccagaaa gcctgggaag 1080
 aactgccctt ctgcaaagg gggactgcat ggttgcat tcatcactga aagtcagagg 1140
 ccaaggaaat catttctact tctttaaaaa ctcttctaa gcatattaaa atgtgaaatt 1200
 ttgcgtactc tctc 1214

<210> 46
 <211> 272
 <212> PRT
 <213> Homo sapiens

<400> 46
 Leu Ile Leu Thr Ser Val Leu Leu Phe Gln Arg His Gly Tyr Cys Thr
 1 5 10 15
 Leu Gly Glu Ala Phe Asn Arg Leu Asp Phe Ser Ser Ala Ile Gln Asp
 20 25 30
 Ile Arg Thr Phe Asn Tyr Val Val Lys Leu Leu Gln Leu Ile Ala Lys
 35 40 45
 Ser Gln Leu Thr Ser Leu Ser Gly Val Ala Gln Lys Asn Tyr Phe Asn
 50 55 60
 Ile Leu Asp Lys Ile Val Gln Lys Val Leu Asp Asp His His Asn Pro
 65 70 75 80
 Arg Leu Ile Lys Asp Leu Leu Gln Asp Leu Ser Ser Thr Leu Cys Ile
 85 90 95
 Leu Ile Arg Gly Val Gly Lys Ser Val Leu Val Gly Asn Ile Asn Ile
 100 105 110
 Trp Ile Cys Arg Leu Glu Thr Ile Leu Ala Trp Gln Gln Gln Leu Gln
 115 120 125

Asp Leu Gln Met Thr Lys Gln Val Asn Asn Gly Leu Thr Leu Ser Asp
 130 135 140
 Leu Pro Leu His Met Leu Asn Asn Ile Leu Tyr Arg Phe Ser Asp Gly
 145 150 155 160
 Trp Asp Ile Ile Thr Leu Gly Gln Val Thr Pro Thr Leu Tyr Met Leu
 165 170 175
 Ser Glu Asp Arg Gln Leu Trp Lys Lys Leu Cys Gln Tyr His Phe Ala
 180 185 190
 Glu Lys Gln Phe Cys Arg His Leu Ile Leu Ser Glu Lys Gly His Ile
 195 200 205
 Glu Trp Lys Leu Met Tyr Phe Ala Leu Gln Lys His Tyr Pro Ala Lys
 210 215 220
 Glu Gln Tyr Gly Asp Thr Leu His Phe Cys Arg His Cys Ser Ile Leu
 225 230 235 240
 Phe Trp Lys Asp Ser Gly His Pro Cys Thr Ala Ala Asp Pro Asp Ser
 245 250 255
 Cys Phe Thr Pro Val Ser Pro Gln His Phe Ile Asp Leu Phe Lys Phe
 260 265 270

<210> 47
 <211> 4059
 <212> DNA
 <213> Homo sapiens

<400> 47
 agtacggcag tgagggcaaa ggcagctcga gcatctcatc tgacgtgagt tcaagtacag 60
 atcacacgcc cactaaagcc cagaagaatg tggctaccag cgaagactcc gacctgagca 120
 tgcgcacact gagcacgccc agcccagccc tgatatgtcc accgaatctc ccaggatttc 180
 agaattggaag gggctcgtcc acctcctcgt cctccatcac cggggagacg gtggccatgg 240
 tgcactcccc gccccgacc cgctcacac acccgctcat ccggctcgcc tccagacccc 300
 agaaggagca ggccagcata gaccggtccc cggaccactc catggtgcag atcttctcct 360
 tcttggccac caaccagctg tgccgctgcg cgcgagtgtg ccgccgtggtg tacaacctgg 420
 cctgggaccc gcggctctgg aggactatcc gcctgacggg cgagaccatc aacgtggacc 480
 gcgcccctcaa ggtgctgacc cgcagactct gccagacac cccaacgtg tgtctcatgc 540
 tggaaaccgt aactgtcagt ggctgcaggc ggctcacaga ccgagggtg tacaccatcg 600
 cccagtgtg ccccgaaactg aggcgactgg aagtctcagg ctgttacaat atctccaacg 660
 aggccgtctt tgatgtggtg tccctctgcc ctaatctgga gcacctggat gtgtcaggat 720
 gctccaaagt gacctgcac agcttgaccc gggaggcctc cattaactg tacccttgc 780
 atggcaaaaca gatttccatc cgctacctgg acatgacgga ctgcttcgtg ctggaggacg 840
 aaggcctgca caccatcgcg gcgcactgca cgcagctcac ccacctctac ctgcgcgct 900
 gcgtccgcct gaccgacgaa ggctgcgct acctggtgat ctactgcgcc tccatcaagg 960
 agctgagcgt cagcgactgc cgcttcgtca gcgacttcgg cctgcgggag atcgccaagc 1020
 tggagtccc cctgcggtac ctgagcatcg cgcactgcgg ccgggtcacc gacgtgggca 1080
 tccgctacgt ggccaagtac tgcagcaagc tgcgctacct caacgcgagg ggctgcgagg 1140
 gcatcacgga ccacggtgtg gactacctcg ccaagaactg caccaaactc aaatccctgg 1200
 atatcggaat atgccctttg gtatccgaca cgggcctgga gtgcctggcc ctggaactgc 1260
 tcaacctcaa cgggtcagc ctcaagtcc cgcgagcat caccggccag ggcttgcaga 1320
 tcgtggccgc caactgcttt gacctccaga cgctgaatgt ccaggactgc gaggtctccg 1380
 tggaggccct gcgctttgtc aaacgccact gcaagcgtg cgtcatcgag cacaccaacc 1440
 cggctttctt ctgaaggac agagttcatc cggcgttgta ttcacacaaa cctgaacaaa 1500
 gcaaattttt ttaaaagcag cgtatgtaag caccgacacc cactcaaac agctctttct 1560

tccgggaagg ttattaggaa tctggccttt atttttcctc attttctcatg ggcaacagag 1620
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 agttttcttt ctcacaaaag atgtacttaa gcaggctgat cgctgttcct tgagcaaggc 1740
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 cccacagttc cacgcccccc cccaagggcc acaccctccc tccctagagc agcagcgagg 1860
 atccatcatc agaatcacag tgctctccag acctcctctc taaactgctt cattgacctt 1920
 agtcactctc ttcaatccca caccatgga cattcttgct aactcaatac catagcactt 1980
 tgcataggca aaatactttt caggcctttt taaaaaattc attacagcaa acagctgggg 2040
 aaggacatgc agtcctcccc cagctctgtc aatgactatg accttggcca aagcacttca 2100
 ctgctctggg ctgcagcttc cagcactgaa tcagaggcca cacagcccaa agattagctt 2160
 catgtccatt atagcattga gggagcagag ataccatac acagaagcac cttggcatag 2220
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 atcctagcga ggcaccagca cacctaatac cagcaaagcc cagatcccc catcagttgc 2520
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 gattgcattt gacctcttct catctattta ttctttata catccagact tcatcacatg 2760
 aagctatttg gggtttaagt tgttaagtgt taattgtgca aattgccacc ctgtgtacct 2820
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 ttgcatgaag tcagatagcc agaagaaatt ccattgctgg ttttcacgaa attcacttgt 3120
 cttttgctaa taaacacatg gcccttctcc agattattct ctagccaagc cccacctttg 3180
 ttacgttgaa atccctcatt tattttcttc tcaaaatgcc cattatccaa atgcagaacc 3240
 tctgcatctc caagccagtt atgctgaatt tgtcaaaact agacaccctt gacaactgca 3300
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 gggtactggg gaaacagctc agcagatttt tggagaccaa accaaaggtc tcaactaggaa 3900
 atttatctgt tttaaaacat tgcttctctc ctggctctgc taaattgaat gctcattgtt 3960
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 gccttaattt actaccaaga aataaagcaa tatgttctg 4059

<210> 48
 <211> 483
 <212> PRT
 <213> Homo sapiens

<400> 48
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 1 5 10 15
 Ser Ser Thr Asp His Thr Pro Thr Lys Ala Gln Lys Asn Val Ala Thr
 20 25 30
 Ser Glu Asp Ser Asp Leu Ser Met Arg Thr Leu Ser Thr Pro Ser Pro
 35 40 45
 Ala Leu Ile Cys Pro Pro Asn Leu Pro Gly Phe Gln Asn Gly Arg Gly
 50 55 60
 Ser Ser Thr Ser Ser Ser Ser Ile Thr Gly Glu Thr Val Ala Met Val
 65 70 75 80

His Ser Pro Pro Pro Thr Arg Leu Thr His Pro Leu Ile Arg Leu Ala
 85 90 95
 Ser Arg Pro Gln Lys Glu Gln Ala Ser Ile Asp Arg Leu Pro Asp His
 100 105 110
 Ser Met Val Gln Ile Phe Ser Phe Leu Pro Thr Asn Gln Leu Cys Arg
 115 120 125
 Cys Ala Arg Val Cys Arg Arg Trp Tyr Asn Leu Ala Trp Asp Pro Arg
 130 135 140
 Leu Trp Arg Thr Ile Arg Leu Thr Gly Glu Thr Ile Asn Val Asp Arg
 145 150 155 160
 Ala Leu Lys Val Leu Thr Arg Arg Leu Cys Gln Asp Thr Pro Asn Val
 165 170 175
 Cys Leu Met Leu Glu Thr Val Thr Val Ser Gly Cys Arg Arg Leu Thr
 180 185 190
 Asp Arg Gly Leu Tyr Thr Ile Ala Gln Cys Cys Pro Glu Leu Arg Arg
 195 200 205
 Leu Glu Val Ser Gly Cys Tyr Asn Ile Ser Asn Glu Ala Val Phe Asp
 210 215 220
 Val Val Ser Leu Cys Pro Asn Leu Glu His Leu Asp Val Ser Gly Cys
 225 230 235 240
 Ser Lys Val Thr Cys Ile Ser Leu Thr Arg Glu Ala Ser Ile Lys Leu
 245 250 255
 Ser Pro Leu His Gly Lys Gln Ile Ser Ile Arg Tyr Leu Asp Met Thr
 260 265 270
 Asp Cys Phe Val Leu Glu Asp Glu Gly Leu His Thr Ile Ala Ala His
 275 280 285
 Cys Thr Gln Leu Thr His Leu Tyr Leu Arg Arg Cys Val Arg Leu Thr
 290 295 300
 Asp Glu Gly Leu Arg Tyr Leu Val Ile Tyr Cys Ala Ser Ile Lys Glu
 305 310 315 320
 Leu Ser Val Ser Asp Cys Arg Phe Val Ser Asp Phe Gly Leu Arg Glu
 325 330 335
 Ile Ala Lys Leu Glu Ser Arg Leu Arg Tyr Leu Ser Ile Ala His Cys
 340 345 350
 Gly Arg Val Thr Asp Val Gly Ile Arg Tyr Val Ala Lys Tyr Cys Ser
 355 360 365
 Lys Leu Arg Tyr Leu Asn Ala Arg Gly Cys Glu Gly Ile Thr Asp His
 370 375 380
 Gly Val Glu Tyr Leu Ala Lys Asn Cys Thr Lys Leu Lys Ser Leu Asp
 385 390 395 400
 Ile Gly Lys Cys Pro Leu Val Ser Asp Thr Gly Leu Glu Cys Leu Ala
 405 410 415

Leu Asn Cys Phe Asn Leu Lys Arg Leu Ser Leu Lys Ser Cys Glu Ser
 420 425 430
 Ile Thr Gly Gln Gly Leu Gln Ile Val Ala Ala Asn Cys Phe Asp Leu
 435 440 445
 Gln Thr Leu Asn Val Gln Asp Cys Glu Val Ser Val Glu Ala Leu Arg
 450 455 460
 Phe Val Lys Arg His Cys Lys Arg Cys Val Ile Glu His Thr Asn Pro
 465 470 475 480
 Ala Phe Phe

<210> 49
 <211> 850
 <212> DNA
 <213> Homo sapiens

<400> 49
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 gggctgggga gaccgcattc ccttggaat cctggtgcag attttcgggt tggtggtggc 120
 ggccgacggc cccatgccct tccctgggag ggctgcgcgc gtgtgccgcc gctggcagga 180
 ggccgcttcc caaccgcgc tctggcacac cgtgaccctg tcgtccccgc tggcggccg 240
 gcctgccaag ggcggggtca aggcggagaa gaagctcctt gcttccctgg agtggcttat 300
 gccaatcgg ttttcacagc tccagaggct gaccctcatc cactggaagt ctcaggatca 360
 ccccggtgtg aagctggtag gtgagtgtgt tccctcggtc actttcctca agctctccgg 420
 ctgccacggt gtgactgtgt acgctctggt catgctagcc aaagcctgct gccagctcca 480
 tagcctggac ctacagcact ccatggtgga gtccacagct gtggtgagct tcttgaggga 540
 ggcagggtcc cgaatgcgca agttgtggct gacctacagc tcccagacga cagccatcct 600
 gggcgattg ctgggcagct gctgccccca gctccaggct ctggaggatga gcaccggcat 660
 caaccgtaat agcattcccc ttcagctgcc tgcgaggct ctgcagaaag gctgccctca 720
 gctccagggt ctgcggctgt tgaacctgat gtggctgccc aagcctccgg gacgaggggt 780
 ggctcccgga ccaggcttcc ctagcctaga ggagctctgc ctggcgagct caacctgcaa 840
 ctttgtgagc 850

<210> 50
 <211> 283
 <212> PRT
 <213> Homo sapiens

<400> 50
 Ala Ala Ala Pro Ala Pro Ala Pro Ala Pro Thr Pro Thr Pro Glu Glu
 1 5 10 15
 Gly Pro Asp Ala Gly Trp Gly Asp Arg Ile Pro Leu Glu Ile Leu Val
 20 25 30
 Gln Ile Phe Gly Leu Leu Val Ala Ala Asp Gly Pro Met Pro Phe Leu
 35 40 45
 Gly Arg Ala Ala Arg Val Cys Arg Arg Trp Gln Glu Ala Ala Ser Gln
 50 55 60
 Pro Ala Leu Trp His Thr Val Thr Leu Ser Ser Pro Leu Val Gly Arg
 65 70 75 80
 Pro Ala Lys Gly Gly Val Lys Ala Glu Lys Lys Leu Leu Ala Ser Leu
 85 90 95
 Glu Trp Leu Met Pro Asn Arg Phe Ser Gln Leu Gln Arg Leu Thr Leu

100

105

110

Ile His Trp Lys Ser Gln Val His Pro Val Leu Lys Leu Val Gly Glu
115 120 125

Cys Cys Pro Arg Leu Thr Phe Leu Lys Leu Ser Gly Cys His Gly Val
130 135 140

Thr Ala Asp Ala Leu Val Met Leu Ala Lys Ala Cys Cys Gln Leu His
145 150 155 160

Ser Leu Asp Leu Gln His Ser Met Val Glu Ser Thr Ala Val Val Ser
165 170 175

Phe Leu Glu Glu Ala Gly Ser Arg Met Arg Lys Leu Trp Leu Thr Tyr
180 185 190

Ser Ser Gln Thr Thr Ala Ile Leu Gly Ala Leu Leu Gly Ser Cys Cys
195 200 205

Pro Gln Leu Gln Val Leu Glu Val Ser Thr Gly Ile Asn Arg Asn Ser
210 215 220

Ile Pro Leu Gln Leu Pro Val Glu Ala Leu Gln Lys Gly Cys Pro Gln
225 230 235 240

Leu Gln Val Leu Arg Leu Leu Asn Leu Met Trp Leu Pro Lys Pro Pro
245 250 255

Gly Arg Gly Val Ala Pro Gly Pro Gly Phe Pro Ser Leu Glu Glu Leu
260 265 270

Cys Leu Ala Ser Ser Thr Cys Asn Phe Val Ser
275 280

<210> 51
<211> 1777
<212> DNA
<213> Homo sapiens

<220>
<221> modified_base
<222> all n positions
<223> n=a, c, g or t

<400> 51
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tgctgaagag cgacagaart tttttaaata ttccgtggat gaaaagtcag ataaagaagc 120
agaagtgtca gaacactcca caggtataac ccatcttcct cctgaggtaa tgctgtcaat 180
tttcagctat cttaatcctc aagagttatg tcgatgcagt caagtaagca tgaaatgggtc 240
tcagctgaca aaaacgggat cgctttggaa acatctttac cctgttcatt gggccagagg 300
tgactgggat agtgggtccc caactgaact tgatactgaa cctgatgatg aatgggtgaa 360
aaataggaaa gatgaaagtc gtgcttttca tgagtgggat gaagatgctg acattgatga 420
atctgaagag tctgcggagg aatcaattgc tatcagcatt gcacaaatgg aaaaacgttt 480
actccatggc ttaattcata acgttctacc atatgttggg acttctgtaa aaaccttagt 540
attagcatag agctctgcag ttccagcaa aatgggttagg cagatttttag agctttgtcc 600
taacctggag catctggatc ttaccagac tgacatttca gattctgcat ttgacagttg 660
gtcttggcct ggttgctgcc agagtcttcg gcatcttgat ctgtctgggt gtgagaaaat 720
cacagatgtg gccctagaga agatttccag agctcttgga attctgacat ctcatcaaa 780
tggctttttg aaaacatcta caagcaaaat tacttcaact gcgtggaaaa ataaagacat 840
taccatgcag tccaccaagc agtatgcctg tttgcacgat ttaactaaca agggcatttg 900
agaagaaata gataatgaac acccctggac taagcctgtt tcttctgaga atttcacttc 960


tccttatgtg tggatgtag atgctgaaga tttggctgat attgaagata ctgtggaatg 1020
 gagacataga aatggtgaaa gtctttgtgt aatggaaaca gcatccaact ttagttgttc 1080
 caccctctggg tggttttagta aggacattgt tggactaagg actagtgtct gttggcagca 1140
 gcattgtgct tctccagcct ttgcgtattg tggctactca ttttggtgta caggaacagc 1200
 ttttaagaact atgtcatcac tcccagaatc ttctgcaatg tgtagaaaag cagcaaggac 1260
 tagattgcct aggggaaaag acttaattta ctttgggagt gaaaaatctg atcaagagac 1320
 tggacgtgta ctctgtttc tcagtttatc tggatggtat cagatcacag accatgggtc 1380
 cagggttttg actctgggag gagggctgcc ttatttggag caccttaatc tctctggttg 1440
 tcttactata actggtgcag gcctgcagga tttggtttca gcatgtcctt cctggaatga 1500
 tgaatacttt tactactgtg acaacattaa cggctcctcat gctgataccg ccagtggatg 1560
 ccagaatttg cagtgtggtt ttcgagcctg ctgccgctct ggcgaatgac ccttgacttc 1620
 tgatctttgt ctacttcatt tagctgagca ggctttcttt catgcacttt actcatagca 1680
 catttcttgt gttaaccatc cctttttgag cgtgacttgt tttgggcca ttnyttacaa 1740
 cttcagaaat ctttaattac agtgrattgt aatgttg 1777

<210> 52
 <211> 590
 <212> PRT
 <213> Homo sapiens

<220>
 <221> SITE
 <222> all Xaa positions
 <223> Xaa=unknown amino acid residue

<400> 52
 Gln His Cys Ser Gln Lys Asp Thr Ala Glu Leu Leu Arg Gly Leu Ser
 1 5 10 15
 Leu Trp Asn His Ala Glu Glu Arg Gln Lys Phe Phe Lys Tyr Ser Val
 20 25 30
 Asp Glu Lys Ser Asp Lys Glu Ala Glu Val Ser Glu His Ser Thr Gly
 35 40 45
 Ile Thr His Leu Pro Pro Glu Val Met Leu Ser Ile Phe Ser Tyr Leu
 50 55 60
 Asn Pro Gln Glu Leu Cys Arg Cys Ser Gln Val Ser Met Lys Trp Ser
 65 70 75 80
 Gln Leu Thr Lys Thr Gly Ser Leu Trp Lys His Leu Tyr Pro Val His
 85 90 95
 Trp Ala Arg Gly Asp Trp Tyr Ser Gly Pro Ala Thr Glu Leu Asp Thr
 100 105 110
 Glu Pro Asp Asp Glu Trp Val Lys Asn Arg Lys Asp Glu Ser Arg Ala
 115 120 125
 Phe His Glu Trp Asp Glu Asp Ala Asp Ile Asp Glu Ser Glu Glu Ser
 130 135 140
 Ala Glu Glu Ser Ile Ala Ile Ser Ile Ala Gln Met Glu Lys Arg Leu
 145 150 155 160
 Leu His Gly Leu Ile His Asn Val Leu Pro Tyr Val Gly Thr Ser Val
 165 170 175
 Lys Thr Leu Val Leu Ala Tyr Ser Ser Ala Val Ser Ser Lys Met Val
 180 185 190
 Arg Gln Ile Leu Glu Leu Cys Pro Asn Leu Glu His Leu Asp Leu Thr

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 26
 65

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195					200					205				
Gln Thr Asp Ile Ser Asp	Ser Ala Phe Asp Ser	Trp Ser Trp Leu Gly	210	215	220									
Cys Cys Gln Ser Leu Arg His Leu Asp Leu Ser Gly Cys Glu Lys Ile			225	230	235							240		
Thr Asp Val Ala Leu Glu Lys Ile Ser Arg Ala Leu Gly Ile Leu Thr			245	250	255									
Ser His Gln Ser Gly Phe Leu Lys Thr Ser Thr Ser Lys Ile Thr Ser			260	265	270									
Thr Ala Trp Lys Asn Lys Asp Ile Thr Met Gln Ser Thr Lys Gln Tyr			275	280	285									
Ala Cys Leu His Asp Leu Thr Asn Lys Gly Ile Gly Glu Glu Ile Asp			290	295	300									
Asn Glu His Pro Trp Thr Lys Pro Val Ser Ser Glu Asn Phe Thr Ser			305	310	315							320		
Pro Tyr Val Trp Met Leu Asp Ala Glu Asp Leu Ala Asp Ile Glu Asp			325	330	335									
Thr Val Glu Trp Arg His Arg Asn Val Glu Ser Leu Cys Val Met Glu			340	345	350									
Thr Ala Ser Asn Phe Ser Cys Ser Thr Ser Gly Cys Phe Ser Lys Asp			355	360	365									
Ile Val Gly Leu Arg Thr Ser Val Cys Trp Gln Gln His Cys Ala Ser			370	375	380									
Pro Ala Phe Ala Tyr Cys Gly His Ser Phe Cys Cys Thr Gly Thr Ala			385	390	395							400		
Leu Arg Thr Met Ser Ser Leu Pro Glu Ser Ser Ala Met Cys Arg Lys			405	410	415									
Ala Ala Arg Thr Arg Leu Pro Arg Gly Lys Asp Leu Ile Tyr Phe Gly			420	425	430									
Ser Glu Lys Ser Asp Gln Glu Thr Gly Arg Val Leu Leu Phe Leu Ser			435	440	445									
Leu Ser Gly Cys Tyr Gln Ile Thr Asp His Gly Leu Arg Val Leu Thr			450	455	460									
Leu Gly Gly Gly Leu Pro Tyr Leu Glu His Leu Asn Leu Ser Gly Cys			465	470	475							480		
Leu Thr Ile Thr Gly Ala Gly Leu Gln Asp Leu Val Ser Ala Cys Pro			485	490	495									
Ser Leu Asn Asp Glu Tyr Phe Tyr Tyr Cys Asp Asn Ile Asn Gly Pro			500	505	510									
His Ala Asp Thr Ala Ser Gly Cys Gln Asn Leu Gln Cys Gly Phe Arg			515	520	525									
Ala Cys Cys Arg Ser Gly Glu Pro Leu Thr Ser Asp Leu Cys Leu Leu														

530

535

540

His Leu Ala Glu Gln Ala Phe Phe His Ala Leu Tyr Ser His Ile Ser
545 550 555 560

Cys Val Asn His Pro Phe Leu Ser Val Thr Cys Phe Gly Pro Ile Xaa
565 570 575

Tyr Asn Phe Arg Asn Leu Asn Tyr Gln Xaa Ile Val Met Leu
580 585 590

<210> 53
<211> 1681
<212> DNA
<213> Homo sapiens

<220>
<221> modified_base
<222> all n positions
<223> n=a, c, g or t

<400> 53
ttttactgta cacagttgat gtattttgat gctgggcctg tctgggtctgt cttgaggatt 60
attaaccttt agaggtatca gagaagcaaa tgggtactgg tgaggctgct cattagggaa 120
gagggcaaaa ggagcactag ctaggtcaga gccatgtttc aggtcacaat gtgatgtcag 180
atgttgctta taaatccttt cttgtcttcg ccattcttaa atcttgatag gtgcctgttg 240
ggaaaactgta aatgcctttc ccaatggaga atcaacagat tgggtgatgg tggagtcggg 300
caggaagact caggtcttct agaggaaagg atgcctcatc accccttngg cccaggcagc 360
tgctgtcaga gaatgacaca gcacctgcac agtcgctgtc cacttcctgc cactgctgtc 420
gggtggggtga cgggagcaaa gtaggcgtgg actttgacat gaggggagctg agcccgcatc 480
cgcttgatgc ctgcacgggt aacctgctgg cagtgttaca gctcgaggcg ctccaggcct 540
cggcagttct ctagggtgtc cagggccaca tcagtgtatga ggaggcagtt gtccaactcc 600
agtaccgcga gcctctcatg gccacaggta ctgttgctca ggtgcaggat cccatcatct 660
gkgatgagtt cacagtggga caggctcagg gcttgcatgt taggacagtg aatggagagc 720
tggatgagtg tgctgtcggg tatcaggatg cawtcttcaa gatccatctt ctccaattcg 780
tggcaattcc gagctaaaag tgtaaaacct gcgtcagtc aatgggagca tcgggcagcc 840
tccaaaattt gcagtcgcgg acagttcaaa cccaggggctg taagagaggc atctgtgagg 900
ttgttgcaac ccgaaaggca gagagcctgt agccgggtgac agcccctgca tatctgcacc 960
acaccttcat ccgtgatacg tgagcaggac tgcaagttga ggtcacaag ctcatggcag 1020
taattctgaa tgtgtttcag agcttcatct tctaactgtg tgcagcccct caggagcagg 1080
gctttcaggc ctgcacaacc tcgcaccagt gcctcgatgc catcttctgt gatctgatca 1140
caccaagaga ggttcaggta ctccagggtt cggcagccct cactgatccc cttcaaggag 1200
ctgtttgtaa tagacacaca ggaggtcaga wccagatgtt tcagcttgga acagaatctg 1260
ctaaggctat aacacgtgct gtcagtgatt tttgtgcatc cattgaggtt caaatgttca 1320
atgtttcggc agttctgtgc aaaggctctt aaggagggaat cccaacacc aatgcagcct 1380
cgcaagctga gcttctctcag gaatccaacg catcgcttcg agatattttc caccactcga 1440
ccctctacat ctatttgaaa gttaaaaaga tctattcttt gccagttgct tccatccagg 1500
gctaagatgt tccaagcctt ggaaatctgt gcacatcggc acaaagttac tatatccaag 1560
aaggaaaata ttcttaacag aagttctttg ggtaactttt tgtaataaag gccttcatca 1620
ttgtttgaga aaaccatggc cgaagagccg cgagcgagcc cacagcccga agtcacacgg 1680
c 1681

<210> 54
<211> 437
<212> PRT
<213> Homo sapiens

<220>
<221> SITE
<222> all Xaa positions
<223> Xaa=unknown amino acid residue

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me
B5

<400> 54
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 1 5 10 15
 Phe Ser Asn Asn Asp Glu Gly Leu Ile Asn Lys Lys Leu Pro Lys Glu
 20 25 30
 Leu Leu Leu Arg Ile Phe Ser Phe Leu Asp Ile Val Thr Leu Cys Arg
 35 40 45
 Cys Ala Gln Ile Ser Lys Ala Trp Asn Ile Leu Ala Leu Asp Gly Ser
 50 55 60
 Asn Trp Gln Arg Ile Asp Leu Phe Asn Phe Gln Ile Asp Val Glu Gly
 65 70 75 80
 Arg Val Val Glu Asn Ile Ser Lys Arg Cys Val Gly Phe Leu Arg Lys
 85 90 95
 Leu Ser Leu Arg Gly Cys Ile Gly Val Gly Asp Ser Ser Leu Lys Thr
 100 105 110
 Phe Ala Gln Asn Cys Arg Asn Ile Glu His Leu Asn Leu Asn Gly Cys
 115 120 125
 Thr Lys Ile Thr Asp Ser Thr Cys Tyr Ser Leu Ser Arg Phe Cys Ser
 130 135 140
 Lys Leu Lys His Leu Xaa Leu Thr Ser Cys Val Ser Ile Thr Asn Ser
 145 150 155 160
 Ser Leu Lys Gly Ile Ser Glu Gly Cys Arg Asn Leu Glu Tyr Leu Asn
 165 170 175
 Leu Ser Trp Cys Asp Gln Ile Thr Lys Asp Gly Ile Glu Ala Leu Val
 180 185 190
 Arg Gly Cys Arg Gly Leu Lys Ala Leu Leu Leu Arg Gly Cys Thr Gln
 195 200 205
 Leu Glu Asp Glu Ala Leu Lys His Ile Gln Asn Tyr Cys His Glu Leu
 210 215 220
 Val Ser Leu Asn Leu Gln Ser Cys Ser Arg Ile Thr Asp Glu Gly Val
 225 230 235 240
 Val Gln Ile Cys Arg Gly Cys His Arg Leu Gln Ala Leu Cys Leu Ser
 245 250 255
 Gly Cys Ser Asn Leu Thr Asp Ala Ser Leu Thr Ala Leu Gly Leu Asn
 260 265 270
 Cys Pro Arg Leu Gln Ile Leu Glu Ala Ala Arg Cys Ser His Leu Thr
 275 280 285
 Asp Ala Gly Phe Thr Leu Leu Ala Arg Asn Cys His Glu Leu Glu Lys
 290 295 300
 Met Asp Leu Glu Xaa Cys Ile Leu Ile Thr Asp Ser Thr Leu Ile Gln
 305 310 315 320
 Leu Ser Ile His Cys Pro Lys Leu Gln Ala Leu Ser Leu Ser His Cys
 325 330 335

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20

Glu Leu Ile Xaa Asp Asp Gly Ile Leu His Leu Ser Asn Ser Thr Cys
 340 345 350
 Gly His Glu Arg Leu Arg Val Leu Glu Leu Asp Asn Cys Leu Leu Ile
 355 360 365
 Thr Asp Val Ala Leu Xaa His Leu Glu Asn Cys Arg Gly Leu Glu Arg
 370 375 380
 Leu Glu Leu Tyr Asp Cys Gln Gln Val Thr Arg Ala Gly Ile Lys Arg
 385 390 395 400
 Met Arg Ala Gln Leu Pro His Val Lys Val His Ala Tyr Phe Ala Pro
 405 410 415
 Val Thr Pro Pro Thr Ala Val Ala Gly Ser Gly Gln Arg Leu Cys Arg
 420 425 430
 Cys Cys Val Ile Leu
 435

<210> 55
 <211> 1866
 <212> DNA
 <213> Homo sapiens

<400> 55
 atgtcaccgg tctttcccat gttaacagtt ctgaccatgt tttattatat atgccttcgg 60
 cgccgagcca ggacagctac aagaggagaa atgatgaaca cccatagagc tatagaatca 120
 aacagccaga cttcccctct caatgcagag gtagtccagt atgccaaga agtagtggat 180
 ttcagttccc attatggaag tgagaatagt atgtcctata ctatgtggaa tttggctggt 240
 gtaccaaagt tattccaag ttctggtgac tttactcaga cagctgtggt tcgaacttat 300
 gggacatggt gggatcagtg tcctagtgtc tccttgccat tcaagaggac gccacctaata 360
 tttcagagcc aggactatgt ggaacttact tttgaaacac aggtgtatcc tacagctgta 420
 catgttctag aaacctatca tcccgagca gtcattagaa ttctcgcttg ttctgcaaat 480
 ccttattccc caaatccacc agctgaagta agatgggaga ttctttggtc agagagacct 540
 acgaaggtga atgcttccca agctcgccag tttaaacctt gtattaagca gataaatttc 600
 cccacaaatc ttatacgact ggaagtaaat agttctcttc tggaatatta cactgaatta 660
 gatgcagttg tgctacatgg tgtgaaggac aagccagtgc tttctctcaa gacttcactt 720
 attgacatga atgatataga agatgatgcc tatgcagaaa aggatgggtg tggaatggac 780
 agtcttaaca aaaagtttag cagtgtgtgc ctccggggaag gccaaataa tgggtatttt 840
 gataaactac cttatgagct tattcagctg attctgaatc atcttacact accagaacctg 900
 tgtagattag cacagacttg caaactactg agccagcatt gctgtgatcc tctgcaatac 960
 atccacctca atctgcaacc atactgggca aaactagatg acactctctt ggaatttcta 1020
 cagtctcgct gcactcttgt ccagtggctt aatttatctt ggactcgcaa tagaggcttc 1080
 atctctgttg caggatttag caggtttctg aaggtttgtg gatccgaatt agtacgcctt 1140
 gaattgtctt gcagccactt tcttaatgaa acttgcttag aagttatttc tgagatgtgt 1200
 ccaaactctac aggccttaaa tctctctctc tgtgataagc taccacctca agctttcaac 1260
 cacattgccca agttatgcag ccttaaacga cttgttctct atcgaacaaa agtagagcaa 1320
 acagcactgc tcagcatttt gaacttctgt tcagagcttc agcacctcag tttaggcagt 1380
 tgtgtcatga ttgaagacta tgatgtgata gctagcatga taggagccaa gtgtaaaaaa 1440
 ctccggaccc tggatctgtg gagatgtaag aatattactg agaatggaat agcagaactg 1500
 gcttctgggt gtccactact ggaggagctt gaccttggct ggtgccaac tctgcagagc 1560
 agcaccgggt gcttcaccag actggcacac cagctcccaa acttgcaaaa actctttctt 1620
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 ttacagcagc tggacatatt aggaacaaga atggtgaagtc cggcatcctt aagaaaactc 1740
 ctggaatctt gtaaagatct ttctttactt gatgtgtcct tctgttcgca gattgataac 1800
 agagctgtgc tagaactgaa tgcaagcttt ccaaaagtgt tcataaaaaa gagctttact 1860
 cagtga 1866

<210> 56
 <211> 621

<212> PRT
<213> Homo sapiens

<400> 56

Met Ser Pro Val Phe Pro Met Leu Thr Val Leu Thr Met Phe Tyr Tyr
1 5 10 15
Ile Cys Leu Arg Arg Arg Ala Arg Thr Ala Thr Arg Gly Glu Met Met
20 25 30
Asn Thr His Arg Ala Ile Glu Ser Asn Ser Gln Thr Ser Pro Leu Asn
35 40 45
Ala Glu Val Val Gln Tyr Ala Lys Glu Val Val Asp Phe Ser Ser His
50 55 60
Tyr Gly Ser Glu Asn Ser Met Ser Tyr Thr Met Trp Asn Leu Ala Gly
65 70 75 80
Val Pro Asn Val Phe Pro Ser Ser Gly Asp Phe Thr Gln Thr Ala Val
85 90 95
Phe Arg Thr Tyr Gly Thr Trp Trp Asp Gln Cys Pro Ser Ala Ser Leu
100 105 110
Pro Phe Lys Arg Thr Pro Pro Asn Phe Gln Ser Gln Asp Tyr Val Glu
115 120 125
Leu Thr Phe Glu Gln Gln Val Tyr Pro Thr Ala Val His Val Leu Glu
130 135 140
Thr Tyr His Pro Gly Ala Val Ile Arg Ile Leu Ala Cys Ser Ala Asn
145 150 155 160
Pro Tyr Ser Pro Asn Pro Pro Ala Glu Val Arg Trp Glu Ile Leu Trp
165 170 175
Ser Glu Arg Pro Thr Lys Val Asn Ala Ser Gln Ala Arg Gln Phe Lys
180 185 190
Pro Cys Ile Lys Gln Ile Asn Phe Pro Thr Asn Leu Ile Arg Leu Glu
195 200 205
Val Asn Ser Ser Leu Leu Glu Tyr Tyr Thr Glu Leu Asp Ala Val Val
210 215 220
Leu His Gly Val Lys Asp Lys Pro Val Leu Ser Leu Lys Thr Ser Leu
225 230 235 240
Ile Asp Met Asn Asp Ile Glu Asp Asp Ala Tyr Ala Glu Lys Asp Gly
245 250 255
Cys Gly Met Asp Ser Leu Asn Lys Lys Phe Ser Ser Ala Val Leu Gly
260 265 270
Glu Gly Pro Asn Asn Gly Tyr Phe Asp Lys Leu Pro Tyr Glu Leu Ile
275 280 285
Gln Leu Ile Leu Asn His Leu Thr Leu Pro Asp Leu Cys Arg Leu Ala
290 295 300
Gln Thr Cys Lys Leu Leu Ser Gln His Cys Cys Asp Pro Leu Gln Tyr
305 310 315 320

Ile His Leu Asn Leu Gln Pro Tyr Trp Ala Lys Leu Asp Asp Thr Ser
 325 330 335
 Leu Glu Phe Leu Gln Ser Arg Cys Thr Leu Val Gln Trp Leu Asn Leu
 340 345 350
 Ser Trp Thr Gly Asn Arg Gly Phe Ile Ser Val Ala Gly Phe Ser Arg
 355 360 365
 Phe Leu Lys Val Cys Gly Ser Glu Leu Val Arg Leu Glu Leu Ser Cys
 370 375 380
 Ser His Phe Leu Asn Glu Thr Cys Leu Glu Val Ile Ser Glu Met Cys
 385 390 395 400
 Pro Asn Leu Gln Ala Leu Asn Leu Ser Ser Cys Asp Lys Leu Pro Pro
 405 410 415
 Gln Ala Phe Asn His Ile Ala Lys Leu Cys Ser Leu Lys Arg Leu Val
 420 425 430
 Leu Tyr Arg Thr Lys Val Glu Gln Thr Ala Leu Leu Ser Ile Leu Asn
 435 440 445
 Phe Cys Ser Glu Leu Gln His Leu Ser Leu Gly Ser Cys Val Met Ile
 450 455 460
 Glu Asp Tyr Asp Val Ile Ala Ser Met Ile Gly Ala Lys Cys Lys Lys
 465 470 475 480
 Leu Arg Thr Leu Asp Leu Trp Arg Cys Lys Asn Ile Thr Glu Asn Gly
 485 490 495
 Ile Ala Glu Leu Ala Ser Gly Cys Pro Leu Leu Glu Glu Leu Asp Leu
 500 505 510
 Gly Trp Cys Pro Thr Leu Gln Ser Ser Thr Gly Cys Phe Thr Arg Leu
 515 520 525
 Ala His Gln Leu Pro Asn Leu Gln Lys Leu Phe Leu Thr Ala Asn Arg
 530 535 540
 Ser Val Cys Asp Thr Asp Ile Asp Glu Leu Ala Cys Asn Cys Thr Arg
 545 550 555 560
 Leu Gln Gln Leu Asp Ile Leu Gly Thr Arg Met Val Ser Pro Ala Ser
 565 570 575
 Leu Arg Lys Leu Leu Glu Ser Cys Lys Asp Leu Ser Leu Leu Asp Val
 580 585 590
 Ser Phe Cys Ser Gln Ile Asp Asn Arg Ala Val Leu Glu Leu Asn Ala
 595 600 605
 Ser Phe Pro Lys Val Phe Ile Lys Lys Ser Phe Thr Gln
 610 615 620

<210> 57
 <211> 984
 <212> DNA
 <213> Homo sapiens

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Handwritten signature

<400> 57
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 ggcggttgaa acagctacat tgaagataat gatgatgaca gcaaaatggc agatctcttg 120
 tcctactttcc acagcaact cacatttcag gaggctgtgc ttaaactgtg tcagcctgag 180
 cttgagagca gtcagattca catatcagtg ctgccaatgg aggtcctgat gtacatcttc 240
 cgatgggtgg tgcctagtga cttggacctc agatcattgg agcagttgtc gctgggtgtgc 300
 agaggattct acatctgtgc cagagacctt gaaatatggc gtctggcctg cttgaaagtt 360
 tggggcagaa gctgtattaa acttggtccg tacacgtcct ggagagagat gtttttagaa 420
 cggcctcgtg ttcggtttga tggcgtgtat atcagtaaaa ccacatatat tcgtcaaggg 480
 gaacagtctc ttgatgttt ctatagagcc tggcaccaag tggaatatta caggtacata 540
 agattctttc ctgatgcca tgtgatgatg ttgacaaccc ctgaagagcc tcagtccatt 600
 gttccacgtt taagaactag gaataccagg actgatgcaa ttctactggg tcactatcgc 660
 ttgtcacaaag acacagacaa tcagaccaa gtatttgctg taataactaa gaaaaaagaa 720
 gaaaaaccac ttgactataa atacagatat tttcgtcgtg tccctgtaca agaagcagat 780
 cagagttttc atgtggggct acagctatgt tccagtgggt accagaggtt caacaaactc 840
 atctggatac atcattcttg tcacattact tacaaatcaa ctggtgagac tgcagtcagt 900
 gcttttgaga ttgacaagat gtacaccccc ttgttcttcg ccagagtaag gagctacaca 960
 gctttctcag aaaggcctct gtag 984

<210> 58
 <211> 327
 <212> PRT
 <213> Homo sapiens

<400> 58
 Met Gln Leu Val Pro Asp Ile Glu Phe Lys Ile Thr Tyr Thr Arg Ser
 1 5 10 15
 Pro Asp Gly Asp Gly Val Gly Asn Ser Tyr Ile Glu Asp Asn Asp Asp
 20 25 30
 Asp Ser Lys Met Ala Asp Leu Leu Ser Tyr Phe Gln Gln Gln Leu Thr
 35 40 45
 Phe Gln Glu Ser Val Leu Lys Leu Cys Gln Pro Glu Leu Glu Ser Ser
 50 55 60
 Gln Ile His Ile Ser Val Leu Pro Met Glu Val Leu Met Tyr Ile Phe
 65 70 75 80
 Arg Trp Val Val Ser Ser Asp Leu Asp Leu Arg Ser Leu Glu Gln Leu
 85 90 95
 Ser Leu Val Cys Arg Gly Phe Tyr Ile Cys Ala Arg Asp Pro Glu Ile
 100 105 110
 Trp Arg Leu Ala Cys Leu Lys Val Trp Gly Arg Ser Cys Ile Lys Leu
 115 120 125
 Val Pro Tyr Thr Ser Trp Arg Glu Met Phe Leu Glu Arg Pro Arg Val
 130 135 140
 Arg Phe Asp Gly Val Tyr Ile Ser Lys Thr Thr Tyr Ile Arg Gln Gly
 145 150 155 160
 Glu Gln Ser Leu Asp Gly Phe Tyr Arg Ala Trp His Gln Val Glu Tyr
 165 170 175
 Tyr Arg Tyr Ile Arg Phe Phe Pro Asp Gly His Val Met Met Leu Thr
 180 185 190
 Thr Pro Glu Glu Pro Gln Ser Ile Val Pro Arg Leu Arg Thr Arg Asn
 195 200 205

Thr Arg Thr Asp Ala Ile Leu Leu Gly His Tyr Arg Leu Ser Gln Asp
 210 215 220
 Thr Asp Asn Gln Thr Lys Val Phe Ala Val Ile Thr Lys Lys Lys Glu
 225 230 235 240
 Glu Lys Pro Leu Asp Tyr Lys Tyr Arg Tyr Phe Arg Arg Val Pro Val
 245 250 255
 Gln Glu Ala Asp Gln Ser Phe His Val Gly Leu Gln Leu Cys Ser Ser
 260 265 270
 Gly His Gln Arg Phe Asn Lys Leu Ile Trp Ile His His Ser Cys His
 275 280 285
 Ile Thr Tyr Lys Ser Thr Gly Glu Thr Ala Val Ser Ala Phe Glu Ile
 290 295 300
 Asp Lys Met Tyr Thr Pro Leu Phe Phe Ala Arg Val Arg Ser Tyr Thr
 305 310 315 320
 Ala Phe Ser Glu Arg Pro Leu
 325

<210> 59
 <211> 765
 <212> DNA
 <213> Homo sapiens

<220>
 <221> modified_base
 <222> all n positions
 <223> n=a, c, g or t

<400> 59
 gcagccctgg atcctgactt agagaatgat gatttctttg tcagaaagac tggggctttc 60
 catgcaaatc catatgttct cagagctttt gaagaattta gaaagttctc tgagcaagat 120
 gattctgtag agcgagatat aattttacag tgtagagaag gtgaacttgt acttccggat 180
 ttggaaaaag atgatatgat tggtcgccga atcccagcac agaagaaaga agtgccgctg 240
 tctggggccc cagatagata ccaccagtc ccttttcccg aaccctggac tcttctcca 300
 gaaattcaag caaaatttct ctgtgtactt gaaaggacat gcccatccaa agaaaaaagt 360
 aatagctgta gaatattagt tccttcatat cggcagaaga aagatgacat gctgacacgt 420
 aagattcagt cctggaaact gggaactacc gtgcctccca tcagtttcac ncctggcccc 480
 tgcagtgagg ctgacttgaa gagatgggag gccatccggg aggccagcag actcaggcac 540
 aagaaaaaggc tgatggtgga gagactcttt caaaagattt atgtgagaa tgggagtaag 600
 tccatgagtg atgtcagcgc agaagatggt caaaacttgc gtcagctgcg ttacgaggag 660
 atgcagaaaa taaaatcaca attaaaagaa caagatcaga aatggcagga tgaccttgca 720
 aaatggaaaag atcgtcgaaa aagttacact tcagatctgc agaag 765

<210> 60
 <211> 255
 <212> PRT
 <213> Homo sapiens

<400> 60
 Ala Ala Leu Asp Pro Asp Leu Glu Asn Asp Asp Phe Phe Val Arg Lys
 1 5 10 15
 Thr Gly Ala Phe His Ala Asn Pro Tyr Val Leu Arg Ala Phe Glu Asp
 20 25 30
 Phe Arg Lys Phe Ser Glu Gln Asp Asp Ser Val Glu Arg Asp Ile Ile

35

40

45

Leu Gln Cys Arg Glu Gly Glu Leu Val Leu Pro Asp Leu Glu Lys Asp
 50 55 60
 Asp Met Ile Val Arg Arg Ile Pro Ala Gln Lys Lys Glu Val Pro Leu
 65 70 75 80
 Ser Gly Ala Pro Asp Arg Tyr His Pro Val Pro Phe Pro Glu Pro Trp
 85 90 95
 Thr Leu Pro Pro Glu Ile Gln Ala Lys Phe Leu Cys Val Leu Glu Arg
 100 105 110
 Thr Cys Pro Ser Lys Glu Lys Ser Asn Ser Cys Arg Ile Leu Val Pro
 115 120 125
 Ser Tyr Arg Gln Lys Lys Asp Asp Met Leu Thr Arg Lys Ile Gln Ser
 130 135 140
 Trp Lys Leu Gly Thr Thr Val Pro Pro Ile Ser Phe Thr Pro Gly Pro
 145 150 155 160
 Cys Ser Glu Ala Asp Leu Lys Arg Trp Glu Ala Ile Arg Glu Ala Ser
 165 170 175
 Arg Leu Arg His Lys Lys Arg Leu Met Val Glu Arg Leu Phe Gln Lys
 180 185 190
 Ile Tyr Gly Glu Asn Gly Ser Lys Ser Met Ser Asp Val Ser Ala Glu
 195 200 205
 Asp Val Gln Asn Leu Arg Gln Leu Arg Tyr Glu Glu Met Gln Lys Ile
 210 215 220
 Lys Ser Gln Leu Lys Glu Gln Asp Gln Lys Trp Gln Asp Asp Leu Ala
 225 230 235 240
 Lys Trp Lys Asp Arg Arg Lys Ser Tyr Thr Ser Asp Leu Gln Lys
 245 250 255

<210> 61
 <211> 36
 <212> PRT
 <213> Homo sapiens

<400> 61
 Leu Pro Pro Glu Leu Ser Phe Thr Ile Leu Ser Tyr Leu Asn Ala Thr
 1 5 10 15
 Asp Leu Cys Leu Ala Ser Cys Val Trp Gln Asp Leu Ala Asn Asp Glu
 20 25 30
 Leu Leu Trp Gln
 35

<210> 62
 <211> 42
 <212> PRT
 <213> Homo sapiens

<400> 62
Leu Pro Gly Glu Val Leu Glu Tyr Ile Leu Cys Cys Gly Ser Leu Thr
1 5 10 15

Ala Ala Asp Ile Gly Arg Val Ser Ser Thr Cys Arg Arg Leu Arg Glu
20 25 30

Leu Cys Gln Ser Ser Gly Lys Val Trp Lys
35 40

<210> 63
<211> 44
<212> PRT
<213> Homo sapiens

<400> 63
Leu Ala Glu Val Val Glu Arg Val Leu Thr Phe Leu Pro Ala Lys Ala
1 5 10 15

Leu Leu Arg Val Ala Cys Val Cys Arg Leu Trp Arg Glu Cys Val Arg
20 25 30

Arg Val Leu Arg Thr His Arg Ser Val Thr Trp Ile
35 40

<210> 64
<211> 39
<212> PRT
<213> Homo sapiens

<400> 64
Leu Pro Asp Glu Val Val Leu Lys Ile Phe Ser Tyr Leu Leu Glu Gln
1 5 10 15

Asp Leu Cys Arg Ala Ala Cys Val Cys Lys Arg Phe Ser Glu Leu Ala
20 25 30

Asn Asp Pro Asn Leu Trp Lys
35

<210> 65
<211> 41
<212> PRT
<213> Homo sapiens

<400> 65
Leu Pro Leu Glu Leu Trp Arg Met Ile Leu Ala Tyr Leu His Leu Pro
1 5 10 15

Asp Leu Gly Arg Cys Ser Leu Val Cys Arg Ala Trp Tyr Glu Leu Ile
20 25 30

Leu Ser Leu Asp Ser Thr Arg Trp Arg
35 40

<210> 66
<211> 39
<212> PRT
<213> Homo sapiens

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Bl
B

<400> 66
 Leu Pro Thr Asp Pro Leu Leu Leu Ile Leu Ser Phe Leu Asp Tyr Arg
 1 5 10 15
 Asp Leu Ile Asn Cys Cys Tyr Val Ser Arg Arg Leu Ser Gln Leu Ser
 20 25 30
 Ser His Asp Pro Leu Trp Arg
 35

<210> 67
 <211> 40
 <212> PRT
 <213> Homo sapiens

<400> 67
 Leu Pro Glu Pro Leu Leu Leu Arg Val Leu Ala Ala Leu Pro Ala Ala
 1 5 10 15
 Glu Leu Val Gln Ala Cys Arg Leu Val Cys Leu Arg Trp Lys Glu Leu
 20 25 30
 Val Asp Gly Ala Pro Leu Trp Leu
 35 40

<210> 68
 <211> 40
 <212> PRT
 <213> Homo sapiens

<400> 68
 Leu Phe Pro Pro Glu Leu Val Glu His Ile Ile Ser Phe Leu Pro Val
 1 5 10 15
 Arg Asp Leu Val Ala Leu Gly Gln Thr Cys Arg Tyr Phe His Glu Val
 20 25 30
 Cys Asp Gly Glu Gly Val Trp Arg
 35 40

<210> 69
 <211> 44
 <212> PRT
 <213> Homo sapiens

<400> 69
 Leu Pro Glu Val Leu Leu Leu His Met Cys Ser Tyr Leu Asp Met Arg
 1 5 10 15
 Ala Leu Gly Arg Leu Ala Gln Val Tyr Arg Trp Leu Trp His Phe Thr
 20 25 30
 Asn Cys Asp Leu Leu Arg Arg Gln Ile Ala Trp Ala
 35 40

<210> 70
 <211> 40
 <212> PRT
 <213> Homo sapiens

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<400> 70
Leu Pro Leu His Met Leu Asn Asn Ile Leu Tyr Arg Phe Ser Asp Gly
1 5 10 15

Trp Asp Ile Ile Thr Leu Gly Gln Val Thr Pro Thr Leu Tyr Met Leu
20 25 30

Ser Glu Asp Arg Gln Leu Trp Lys
35 40

<210> 71
<211> 39
<212> PRT
<213> Homo sapiens

<400> 71
Leu Pro Asp His Ser Met Val Gln Ile Phe Ser Phe Leu Pro Thr Asn
1 5 10 15

Gln Leu Cys Arg Cys Ala Arg Val Cys Arg Arg Trp Tyr Asn Leu Ala
20 25 30

Trp Asp Pro Arg Leu Trp Arg
35

<210> 72
<211> 44
<212> PRT
<213> Homo sapiens

<400> 72
Ile Pro Leu Glu Ile Leu Val Gln Ile Phe Gly Leu Leu Val Ala Ala
1 5 10 15

Asp Gly Pro Met Pro Phe Leu Gly Arg Ala Ala Arg Val Cys Arg Arg
20 25 30

Trp Gln Glu Ala Ala Ser Gln Pro Ala Leu Trp His
35 40

<210> 73
<211> 39
<212> PRT
<213> Homo sapiens

<400> 73
Leu Pro Pro Glu Val Met Leu Ser Ile Phe Ser Tyr Leu Asn Pro Gln
1 5 10 15

Glu Leu Cys Arg Cys Ser Gln Val Ser Met Lys Trp Ser Gln Leu Thr
20 25 30

Lys Thr Gly Ser Leu Trp Lys
35

<210> 74
<211> 39
<212> PRT
<213> Homo sapiens

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PS

<400> 74
Leu Pro Lys Glu Leu Leu Leu Arg Ile Phe Ser Phe Leu Asp Ile Val
1 5 10 15

Thr Leu Cys Arg Cys Ala Gln Ile Ser Lys Ala Trp Asn Ile Leu Ala
20 25 30

Leu Asp Gly Ser Asn Trp Gln
35

<210> 75
<211> 48
<212> PRT
<213> Homo sapiens

<400> 75
Leu Pro Tyr Glu Leu Ile Gln Leu Ile Leu Asn His Leu Thr Leu Pro
1 5 10 15

Asp Leu Cys Arg Leu Ala Gln Thr Cys Lys Leu Leu Ser Gln His Cys
20 25 30

Cys Asp Pro Leu Gln Tyr Ile His Leu Asn Leu Gln Pro Tyr Trp Ala
35 40 45

<210> 76
<211> 44
<212> PRT
<213> Homo sapiens

<400> 76
Leu Pro Met Glu Val Leu Met Tyr Ile Phe Arg Trp Val Val Ser Ser
1 5 10 15

Asp Leu Asp Leu Arg Ser Leu Glu Gln Leu Ser Leu Val Cys Arg Gly
20 25 30

Phe Tyr Ile Cys Ala Arg Asp Pro Glu Ile Trp Arg
35 40

<210> 77
<211> 49
<212> PRT
<213> Homo sapiens

<400> 77
Leu Pro Pro Glu Ile Gln Ala Lys Phe Leu Cys Val Leu Glu Arg Thr
1 5 10 15

Cys Pro Ser Lys Glu Lys Ser Asn Ser Cys Arg Ile Leu Val Pro Ser
20 25 30

Tyr Arg Gln Lys Lys Asp Asp Met Leu Thr Arg Lys Ile Gln Ser Trp
35 40 45

Lys

<210> 78
<211> 39
<212> PRT
<213> Homo sapiens

<400> 78
Leu Pro His His Val Val Leu Gln Ile Phe Gln Tyr Leu Pro Leu Leu
1 5 10 15
Asp Arg Ala Cys Ala Ser Ser Val Cys Arg Arg Trp Asn Glu Val Phe
20 25 30
His Ile Ser Asp Leu Trp Arg
35

<210> 79
<211> 43
<212> PRT
<213> Homo sapiens

<400> 79
Leu Trp Ala Trp Gly Glu Lys Gly Val Leu Ser Asn Ile Ser Ala Leu
1 5 10 15
Thr Asp Leu Gly Gly Leu Asp Pro Val Trp Leu Val Cys Gly Ser Trp
20 25 30
Arg Arg His Val Gly Ala Gly Leu Cys Trp Ala
35 40

<210> 80
<211> 59
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 80
agtagtaaca aaggtcaaag acagttgact gtatcgtcga ggatgccttc aattaagtt 59

<210> 81
<211> 58
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 81
gcggttactt acttagagct cgacgtctta cttacttagc tcacttctct tcacacca 58

<210> 82
<211> 12
<212> PRT
<213> Homo sapiens

<400> 82

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amb
B3

Cys Asp Gly Glu Lys Asp Thr Tyr Ser Tyr Leu Ala
1 5 10

<210> 83
<211> 25
<212> PRT
<213> Homo sapiens

<400> 83
Cys Glu Ser Ser Phe Ser Leu Asn Met Asn Phe Ser Ser Lys Arg Thr
1 5 10 15

Lys Phe Lys Ile Thr Thr Ser Met Gln
20 25

<210> 84
<211> 12
<212> PRT
<213> Homo sapiens

<400> 84
Cys Glu Glu Ala Gln Val Arg Lys Glu Asn Gln Trp
1 5 10

<210> 85
<211> 19
<212> PRT
<213> Homo sapiens

<400> 85
Asn Ala Gly Ser Val Glu Gln Thr Pro Lys Lys Pro Gly Leu Arg Arg
1 5 10 15

Arg Gln Thr

<210> 86
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 86
cctgggggat gttctca

17

<210> 87
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 87
ggcttccggg catttag

17

<210> 88
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 88
catctggcac gattcca

17

<210> 89
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 89
ccgctcatcg tatgaca

17